

Discovery and Construction of Authors' Profile from Linked Data (A case study for Open Digital Journal)

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AGENDA

- Motivation
- Digital Journal and Linked Data
- Concept Aggregation Framework
- Datasets
- System Architecture
- Results and Findings
- Case Study
- Conclusion and Future Work

MOTIVATION

„To Investigate and highlight the potential benefits which can be drawn from Sematic Repositories of Linked data to the Digital Publishing Systems“

Digital Journal & Linked Data

- Well Linked Digital Journal is of great importance in creating opportunities for collaborations between organization, institutions, and persons
- Finding Author's information is crucial to increase the overall productivity and accomplishing following tasks
 - users of digital journal need to search the research collaborators
 - users need to search experts to seek guidance
 - journal administration want to explore new reviewers

Digital Journal & Linked Data (Cont.)

- Finding tasks and data is a challenge
- bit of

Need to have a system which can retrieve, aggregate, structure information from diverse sources, and can present a coherent view of authors' profiles at one place

- (Access)
- Many catered these
- Providing open and
- Dataset

Concept Aggregation Framework

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2008

Evaluation showed

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Implemented and Running at

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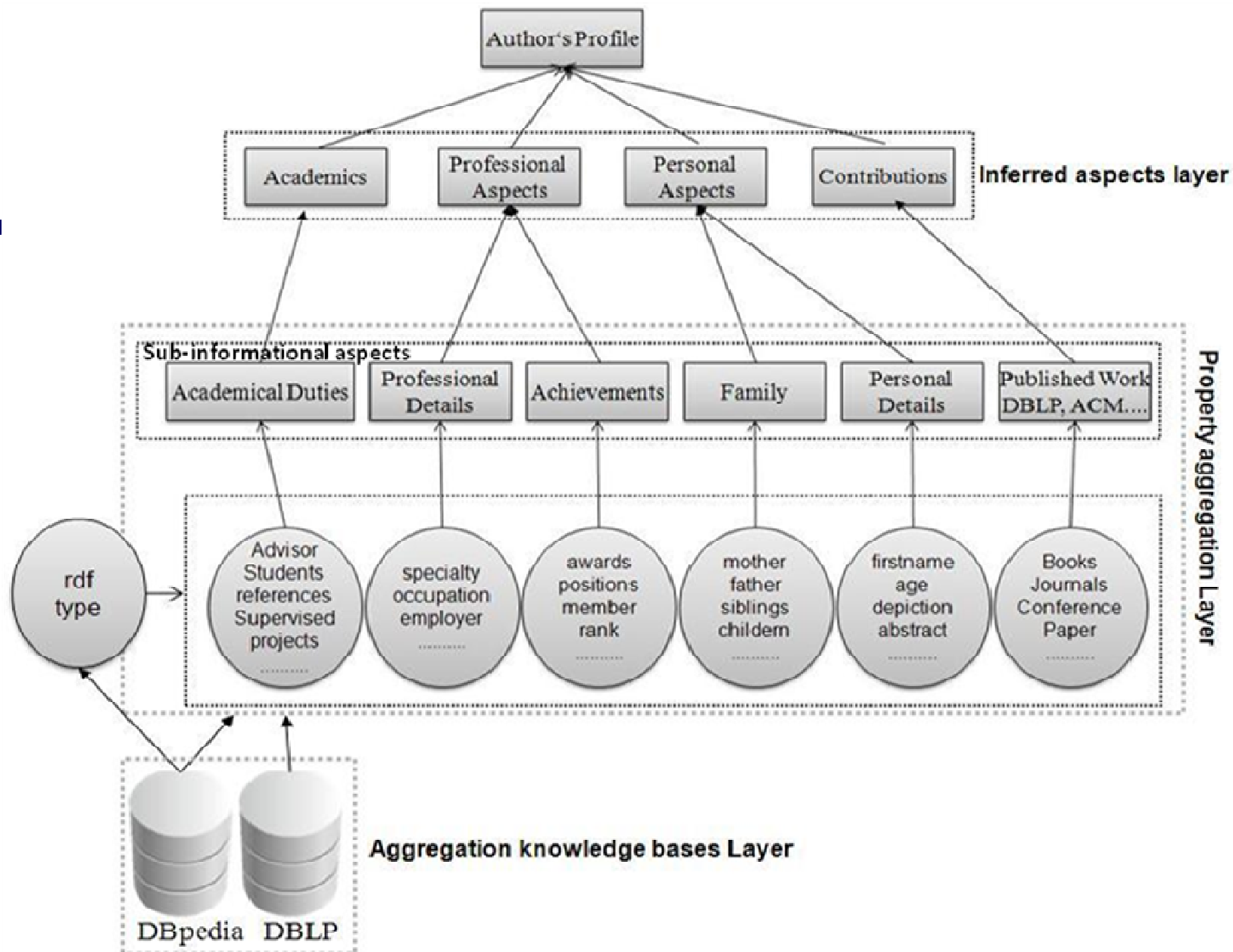
Example:

<http://cafsial.opendatahub.org/?q=Arnold%20Schwarzenegger>

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Concept Aggregation Framework & Digital Journal

- Continuity of our previous work by exploring digital Journal as an application area.
- Linked Authors of Digital journal with Linked data by Concpet aggregation framework
- Author profile (Personal, Professional, Academics and Contributions)



DATASETS

Journal of Universal Computer Science

- Publishing Issues from 1995 uninterruptedly.
Covering all Computer Science topics

- 2593 authors

DBpedia

- Persondata
- Links to DBLP

DBLP (Berlin and Hanover SPARQL endpoints)

SYSTEM ARCHITECTURE

● System Architecture is divided into three tiers

● URI Acquisition

● DBpedia Person Data direct matching with J.UCS Author Dataset

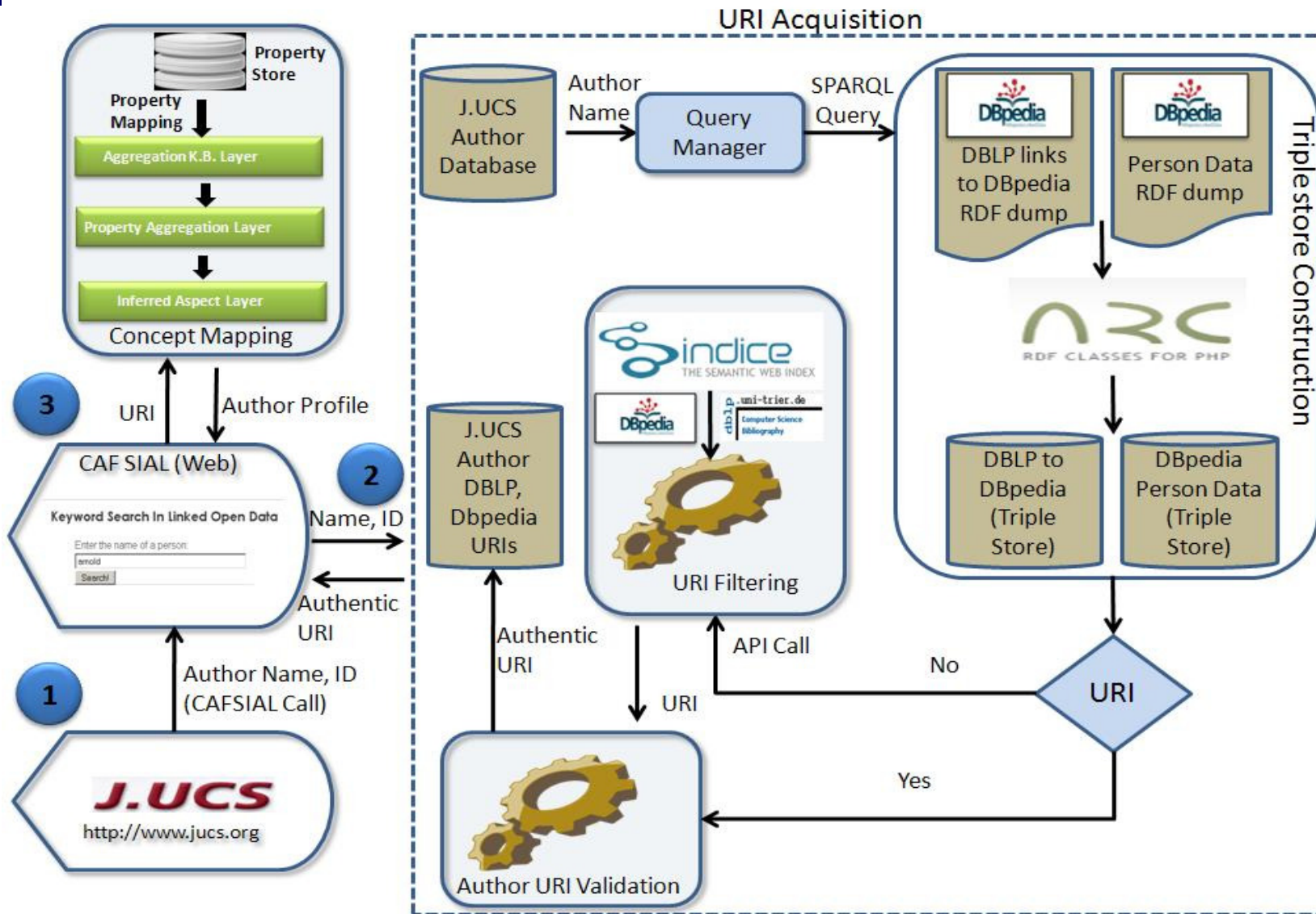
● DBpedia Links to DBLP direct matching

● Sindice Search Service

● URI Authentication

● Concept Mapping

SYSTEM ARCHITECTURE



RESULTS

Process Name	Number of Authors	Author's DBpedia URI	Author's DBLP URI
DBpediaPerson TripleStore Data direct matching	2593	7	----
DBpedia to DBLP direct matching	2586	8	8
Sindice (Semantic Search Service)	2578	322	2285
Total Computed Results	2593	337	2293
Uri Authentication	337	66	2293
Author having both DBpedia and DBLP URI	2593	66	66
Author having only DBLP URI	2593	---	2227

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FINDINGS

- 132 out of 337 found URI'S were non existing Author's Dbpedia URI wrongly indexed by Sindice
- 139 out of 225 remaining URI's authors matched exactly with the name but referring to the wrong enteries (People from other fields)
- For solving name abmigiuty we used
 - Dbpedia Abstract / Comment, RDF type and SKOS Categories for the auhtentication

CASE STUDY

Introduction



Gio Wiederhold (born June 24, 1936) is an Emeritus Professor of Computer Science at Stanford University, with courtesy appointments in Medicine and Electrical Engineering. His research focuses on large-scale systems design and evolution, specifically applied to information systems, the protection of their content, often using knowledge-based techniques. He has authored and coauthored more than 400 published papers and reports on computing and medicine and has served as the Editor-in-Chief of ACM TODS and as a program manager at DARPA. At DARPA (1991-1994) Gio initiated the I3 program

Personal Aspects

birthdate = 1936-06-24
birthplace = VareseC_Italy
Citizenship = United_States_of_America
residence = United_States_of_America
name = Gio(vanni) Corrado Melchiorre Wiederhold
almaMater = University_of_California,_San_Francisco
reference = <http://infolab.stanford.edu/~gio/>
sameas = http://mpii.de/yago/resource/Gio_Wiederhold
<http://rdf.freebase.com/ns/guid.9202a8c04000641f8000000005785550>

Academics

doctoral Advisor = John_Amsden_Starkweather
doctoral Students = icardo_Kortas
 Jan_Jannink
 Byung_Suk_Lee
 Ramez_El-Masri
 Kyu_Young_Whang
 Erik_Gilbert
 Prasenjit_Mitra

[more](#)

[...Section Deleted...]

Professional Aspects

Professional Details

field = Computer_Science
workInstitutions = Stanford_University
profession = Professor, Computer Scientist

Achievements

Prizes = institute_of_Electrical_and_Electronics_Engineers%23Fellow_Grade
 Association_for_Computing_Machinery%23Fellows

Contributions (DBLP Indexed)

DBLP_autho_link = http://dblp.l3s.de/d2r/page/authors/Gio_Wiederhold

Publication List

books = Integrating Temporal Data in a Heterogeneous Environment
 Database Design, Revised 2nd Edition
 Database Design [more](#)
journals = Composition of engineering web services with distributed data-
 flows and computations [more](#)
conferences = Panel: Is Generic Metadata Management Feasible?
 [...Section Deleted...]

CONCLUSIONS & FUTURE WORKS

- Highlight the added value which Linked Data can bring in for the conventional applications like Digital Journals by intelligent manipulation of Semantic Search services and datasets.
- The linking will help
 - ◆ Searching for research collaborator
 - ◆ Journal Administration to assign reviewing duties
- Will be including IEEE, ACM, FOAF and microformats to enrich profiles

REFERENCES

- [1]Latif, A., Afzal, M.T., Ussaeed, A., Hoefler, P., Tochtermann, K. Harvesting Pertinent Resources from Linked Data, accepted in Journal of Digital Information Management.***
- [2]Latif, A., Afzal, M.T., Ussaeed, A., Hoefler, P., Tochtermann, K. CAF-SIAL: Concept aggregation framework for structuring informational aspects of linked open data, In: Proceedings of International Conference on Networked Digital Technologies, pp. 100-105, Ostrava, Czech Republic, 28-31, Jul. 2009.***
- [3]Latif, A., Afzal, M.T., Hoefler, P., UsSaeed, A., Tochtermann, K. "Translating Keywords into URIS", accepted in the 2nd International Conference on Interaction Sciences: Information Technology, Culture and Human, Seoul, Korea, 24-26 Nov. 2009.***

QUESTIONS?

Thanks

Online Access:
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