

Elsevier Research Intelligence

# Fueling VIVO with rich meta-data from a RIS system

*Thomas Vestdam (PhD)*  
Head of Product Technology  
Elsevier (Aalborg, Denmark)  
[T.Vestdam@elsevier.com](mailto:T.Vestdam@elsevier.com)

## The Desire

### Pure



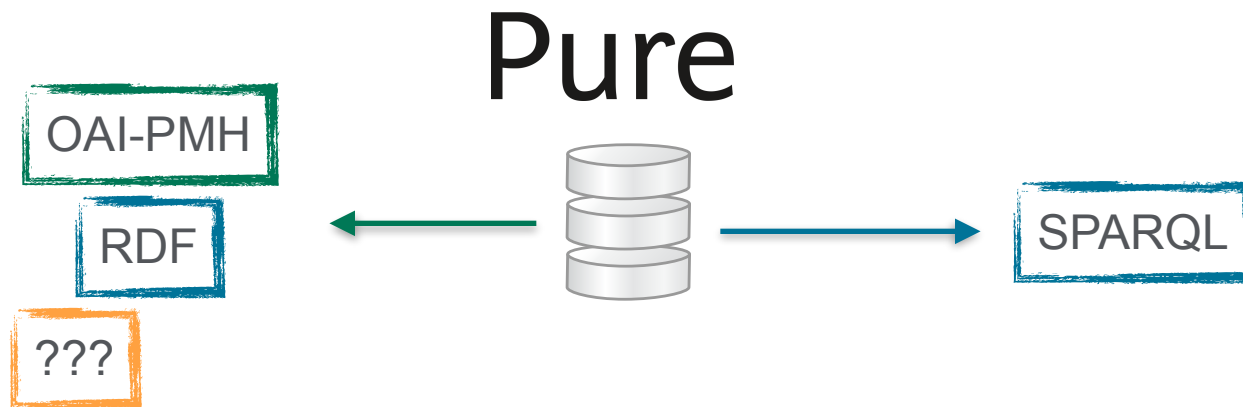
- HR
- Finance
- Repositories
- Wos, Scopus, Pubmed, ...
- ...

- Lots of data (fine-grained)
- Co-author network (local)
- Researcher Profiles
- ...

### VIVO Network

- Global Network
- SPARQL

## The Problem - harvesting vs querying



## Option 1: A SPARQL parser and query engine

Sounds like a great idea, and would be a great software engineering project ...but...

- Interpreter (SPARQL Syntax)
- Build an intermediate representation
  - ...based on the VIVO ontology
- Optimization
  - ...rewrite to a Pure “friendly” intermediate representation
  - and, what about reasoning?
- Generate SQL queries
  - ...based on the Pure “friendly” intermediate representation
- Generate a RDF/VIVO result



## Option 1: A SPARQL parser and query engine

Sounds like a great idea, and would be a great software engineering project ...but...

- This is actually quite complicated
- ...costly to build
- ...costly to maintain
- ...and, consequently error prone



## Option 2: VIVO “index”

Straight forward and “proven” solution - it works.

- Jena TDB + Fuseki

Relevant caveats

- Yet another “server” to administrate
  - And, pay for...
- Rebuild vs event driven updates

Mapping

- Fairly straight forward
- The VIVO 1.6 ontology is pretty mature
- Developers challenge was to get their head wrapped around the ontology



## Option 3: Your own aggregator

The DIY approach. Fast as h...

- MogoDB + ElasticSearch

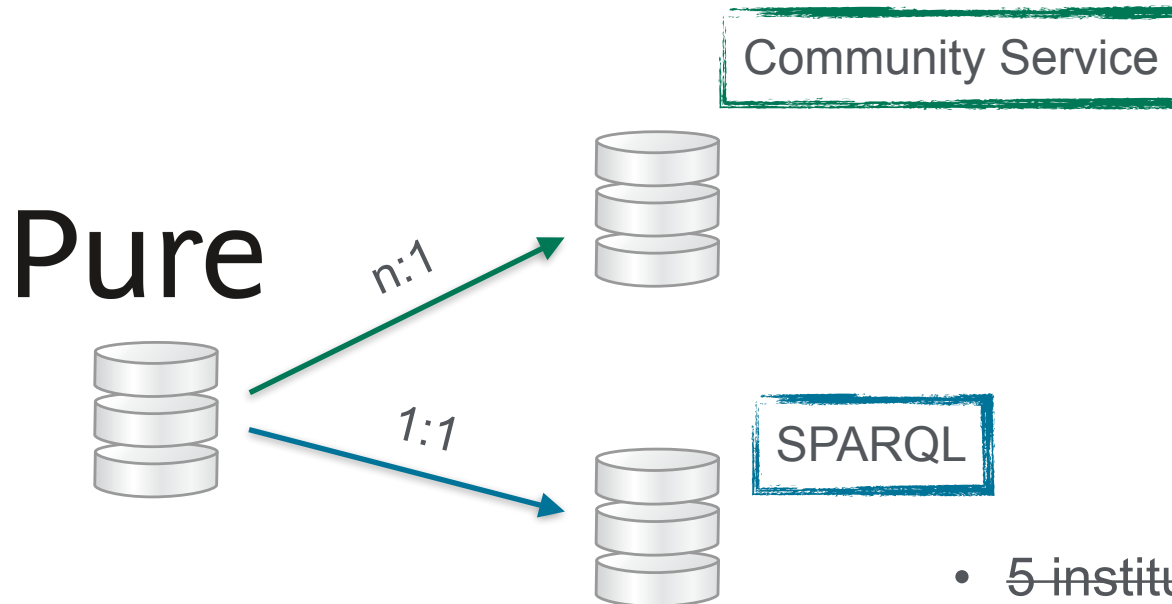
Relevant caveats

- Closed
- “Proprietary”
- ... primarily because we are lazy developers



## What we did...

- 60 institutions
- 90.000 researchers
- 3.200.000 publications
- 115.000 grants
- 300 equipment



- 5 institutions >>> 1 (DTU)



Search All UT System Experts



THE UNIVERSITY OF  
**TEXAS**  
— AT AUSTIN —  
Your Experts Network

Search

[Home](#) [Experts](#) [Research outputs](#) [Research units](#) [Equipment](#) [Journals](#)

Refine and narrow down result by adding related concepts

**Engineering & Materials Science**

- ☒ Glow discharges
- ☐ Temperature
- ☐ Plasmas
- ☐ Electrons
- ☐ Substrates
- ☐ Chemical analysis
- ☐ Experiments
- ☐ Molecules
- ☐ Kinetics
- ☐ Gases
- ☐ Oxygen
- ☐ Lasers
- ☐ Surface treatment
- ☐ Scanning electron microscopy
- ☐ Thin films
- ☐ Electrodes
- ☐ Coatings
- ☐ Atoms
- ☐ Ions
- ☐ Fabrication
- ☐ Water
- ☐ Adhesion
- ☐ Defects
- ☐ Surface roughness
- ☐ Composite materials
- ☐ X ray photoelectron spectroscopy
- ☐ Spectroscopy
- ☐ Fluids
- ☐ Adsorption
- ☐ Vacuum

Selected concepts

**Engineering & Materials Science**☒ Glow discharges

Internal experts ?

Experts community ?

DIRECT2Experts ?

88 experts found with research output relating to all selected concepts

- Sanjay K Banerjee**  
UT Austin  
579 Publications
- Buddy D. Ratner**  
University of Washington  
461 Publications  
10 Awards
- Hidenori Akiyama**  
Kumamoto University  
437 Publications
- Stuart L Cooper**  
Ohio State University Health Sciences  
415 Publications
- Yves J Chabal**  
UT Dallas  
401 Publications
- Mark Kushner**  
University of Michigan  
386 Publications  
39 Awards
- Michael S Sacks**  
UT Austin  
344 Publications
- Terry A. Miller**  
Ohio State University Health Sciences  
322 Publications
- John F Stanton**  
UT Austin  
276 Publications
- David M Lubman**  
University of Michigan  
263 Publications  
70 Awards
- David G. Castner**  
University of Washington  
260 Publications  
10 Awards
- T. Braun**  
Educatin Társadalmi Szolgáltató Nonprofit Kft.  
253 Publications

[Search](#)[About](#)[Help and FAQ](#)[Influent Home](#)

Everything glow discharges

[Search help](#)

## Refine Results

## Institution List

Check boxes to refine search.

- ☐ UT Arlington
- ☒ **UT Austin**
- ☐ UT Dallas
- ☐ UT El Paso
- ☐ UT Permian Basin (Odessa)
- ☐ UT San Antonio
- ☐ UT Tyler
- ☐ UT Southwestern Medical Center (Dallas)
- ☐ UT Medical Branch (Galveston)
- ☐ UT Health (Houston)
- ☐ UT Health Science Center-San Antonio
- ☐ UT MD Anderson Cancer Center
- ☐ UT Health Northeast (Tyler)
- [Clear limitation](#)

## Concept List

Select Concept to refine search.

**Engineering & Materials Science**

- ☒ Gas heating
- ☐ Supersonic flow
- ☐ Discharge (fluid mechanics)
- ☐ Joule heating
- ☐ Electron temperature

## Search Result

7 experts

Selected concepts

☒ Glow discharges

1 — 7 out of 7

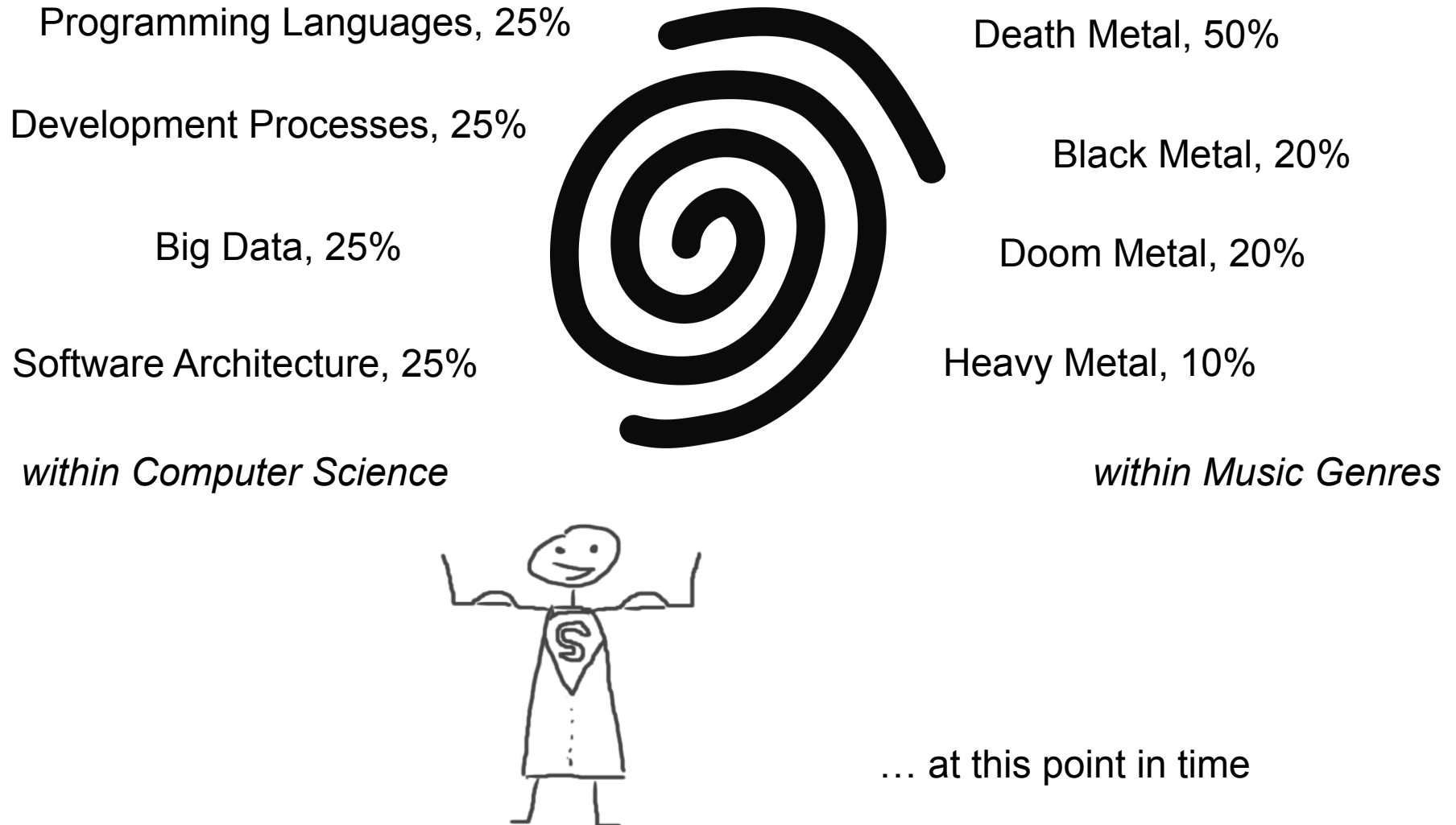
Publications

- |                                       |                         |
|---------------------------------------|-------------------------|
| <b>L L Raja</b><br>UT Austin          | 22 / 83<br>Publications |
| <b>Noel T Clemens</b><br>UT Austin    | 3 / 119<br>Publications |
| <b>Sanjay K Banerjee</b><br>UT Austin | 2 / 577<br>Publications |
| <b>Michael S Sacks</b><br>UT Austin   | 2 / 342<br>Publications |
| <b>John F Stanton</b><br>UT Austin    | 1 / 271<br>Publications |
| <b>Kyusung Park</b><br>UT Austin      | 1 / 50<br>Publications  |
| <b>Swadesh M Mahajan</b><br>UT Austin | 1 / 214<br>Publications |

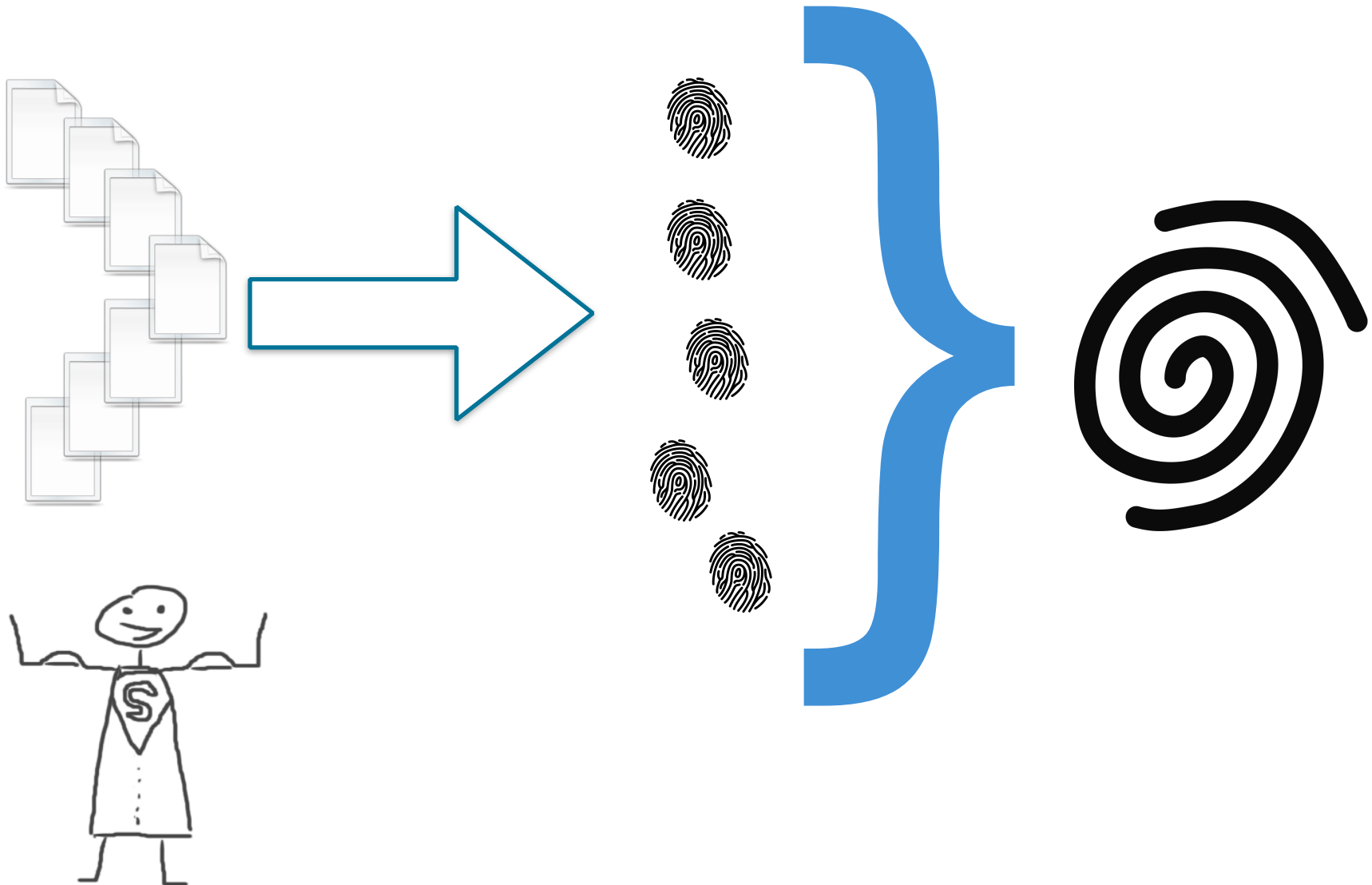
## Contact Experts

To add an expert to contact list, hover over person icon and click sign next to name.

## Towards a networking enabling standard



## Towards a networking enabling standard



# Towards a networking enabling standard

