

Semantic Discovery Systems

Accelerating Research™

Accelerating Investigative Discovery

Martin Flanagan
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About me

Accelerating Research

- ★ Software Engineer
 - ✦ Based in Canberra
 - ✦ Started programming in 1980
 - ✦ Computer Science/Electrical Engineering
 - ✦ Followed emerging technologies
 - ▲ Microprocessor->Client/Server->Distributed Computing
 - > Internet Computing->Service Oriented Architecture
- ★ Co-founded Eucalypt Software Partners in 1997
 - ✦ Specialist in Enterprise Application Integration (EAI)
 - ▲ 40+ integration projects
 - ✦ Developer of
 - ▲ Integration Methodology Tool (The Right Approach)
 - ▲ Integration Process Management System (Mantle)
- ★ Advisor to
 - ✦ Semantic Discovery Systems (EII)



- ★ A key R&D bottleneck is the inability of non technical researchers to ask sophisticated questions of their data – without I.T. help
- ★ The Semantic Web may remove this bottleneck – the researcher can phrase questions directly and with a very fast turnaround time
- ★ SDS is a leading Semantic Web technology focused upon unlocking the value in RDBMS and other 'legacy' data – as well as the web
- ★ SDS uses an ontology-driven approach to query over federated data sources such that very sophisticated questions can be directly phrased + answered without programming

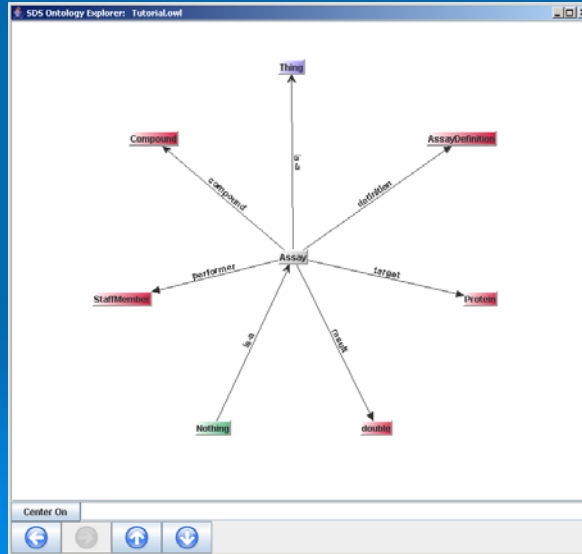
key	compound	target	result	performer	defn
1	1	3	3	1	4
2	1	9	3	4	1
3	2	4	4	4	3
4	3	6	5	2	2
5	4	6	6	1	4
6	5	7	7	1	1
7	6	8	8	2	4
8	7	9	9	2	1
9	8	10	10	3	2
10	9	1	1	3	2
11	10	2	2	3	4
12					
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30					

CLASS EDITOR
For Class: Assay (Instance of owl:Class) Inferred View

Property	Value	Lang
irds:comment	An assay	

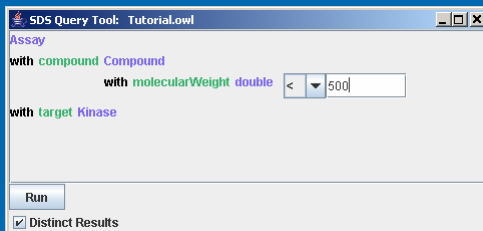
Asserted Conditions
NECESSARY & SUFFICIENT

- owl:Thing
- compound **some** Compound
- definition **exactly** 1 AssayDefinition
- performer **exactly** 1 StarMember
- result **exactly** 1
- target **some** Protein



SDS Results Explorer									
double label0	double label1	string label2	int label3	StaffMember label4	string label5	string label6	int label7	double label8	string v_name
3.0	100.0	C1	6	StaffMember	Robert	Taylor	3	-2.3	P1
3.5	600.0	C2	4	StaffMember	Robert	Taylor	3	0.5	P2
4.0	200.0	C3	3	StaffMember	Susan	Davis	4	1.0	P3
4.5	700.0	C4	2	StaffMember	Susan	Davis	4	2.3	P4
4.99	300.0	C5	2	StaffMember	William	Smith	2	2.2	P5
5.5	800.0	C6	4	StaffMember	John	Smith	1	1.8	P6
6.0	400.0	C7	5	StaffMember	John	Smith	1	-1.0	P7
6.5	900.0	C8	7	StaffMember	William	Smith	2	-1.4	P8
7.0	499.0	C9	8	StaffMember	Susan	Davis	4	1.0	P3
7.0	499.0	C9	8	StaffMember	William	Smith	2	-1.9	P9
7.5	1000.0	C10	9	StaffMember	Robert	Taylor	3	-2.3	P10

Expand Expand One Level

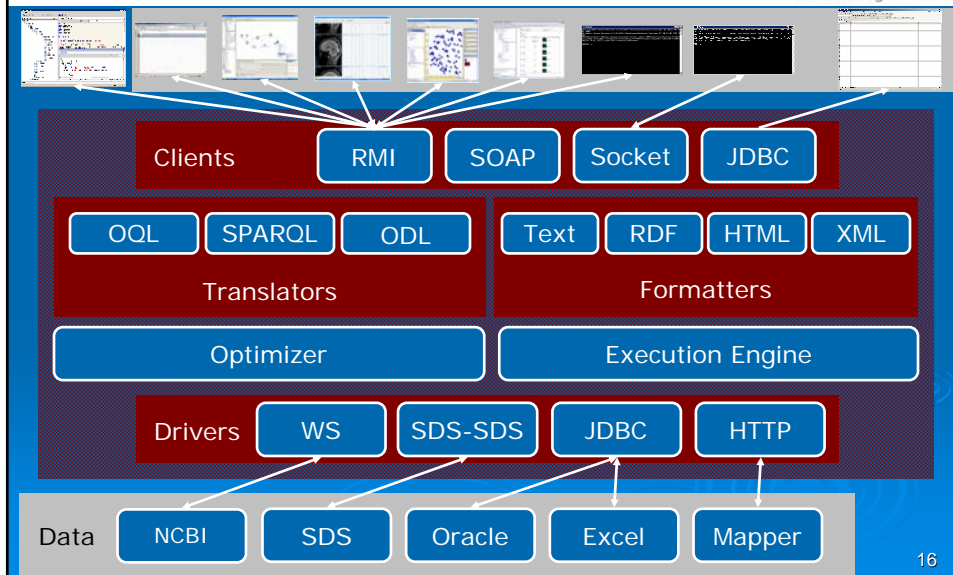


SDS Results Explorer

double	double	string	int	string	string	int	string	string	int	double	string
label0	label1	label2	label3	v_firstName	v_lastName	v_staffID	label5	label6	label7	label8	label9
3.0	100.0	C1	6	Carol	Wilson	5	Robert	Taylor	3	-2.3	P1
4.0	200.0	C3	3	Carol	Wilson	5	Susan	Davis	4	1.0	P3
7.0	499.0	C9	8	Carol	Wilson	5	Susan	Davis	4	1.0	P3

Expand Expand One Level

- ★ Accurately describing single domains (OWL) allows valid cross-silo queries
 - ✦ Assay/Compound example
- ★ Shared controlled vocabularies lead to higher data quality
 - ✦ Using SDS Mediators
- ★ Exposing higher level abstractions as semantic web services
 - ✦ Publishing SDS Mediators through Web Services, SPARQL or JDBC/ODBC
 - ✦ Integration with third-party ontology tools like TopQuadrant TopBraid



- ★ SDS connects any and all distributed data (Web, RDBMS ...)
- ★ And makes it appear to be locally present for query
- ★ This means up to the minute access to all relevant R&D data

- ★ The role of SDS in Accelerating Research
 - ✦ SDS is an immediately downloadable Semantic Query Platform with a 10+ year provenance
 - ✦ We welcome collaboration with the Academic, Open Source and Commercial Communities
 - ✦ Our background and usage of SDS has been strongly in Life Science Drug R&D
- ★ More information
 - ✦ Please join our website forum and learn more ...
 - ✦ Visit the HP/Microsoft booth at the eResearch exhibition
 - ✦ Email us – sales@eucalypt.com.au

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Questions

mflanagan@eucalypt.com.au

www.SemanticDiscoverySystems.com