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Developing Semantic Web Applications on the Java™ Platform

Henry Story,
Semantic Web Evangelist
Sun Microsystems

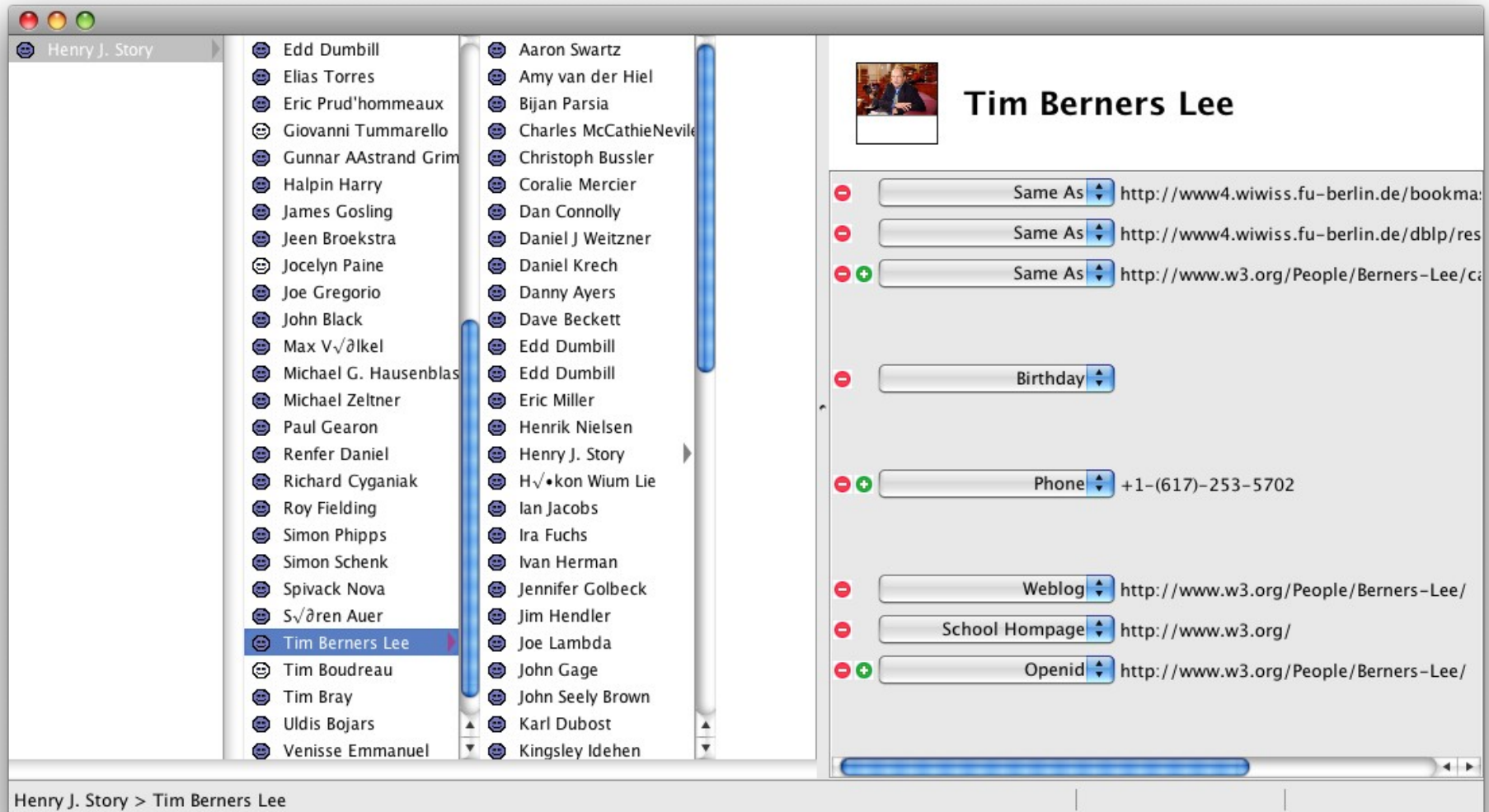
PAN-5542



3 Semantic Web Sessions

	Wednesday	Thursday	Friday
1:30pm	How to Implement Your Own OpenSocial Container on the Java™ Platform - Google	Developing Semantic Web Apps PAN-5542	Semantic Web for the Working Ontologist - TS-5555
2:30pm			
3:30pm			
4:30pm			
5:30pm			
6:30pm		Turn Your Web Site into an OpenSocial Container	LinkedIn: A Professional Social Network Built with Java
7:30pm		Beatnik: Building an Open Social Network Browser - BOF-5911	
8:30pm		Creating Facebook and OpenSocial Widgets with Java™ Technology	

Beatnik: a hyperdata Address Book





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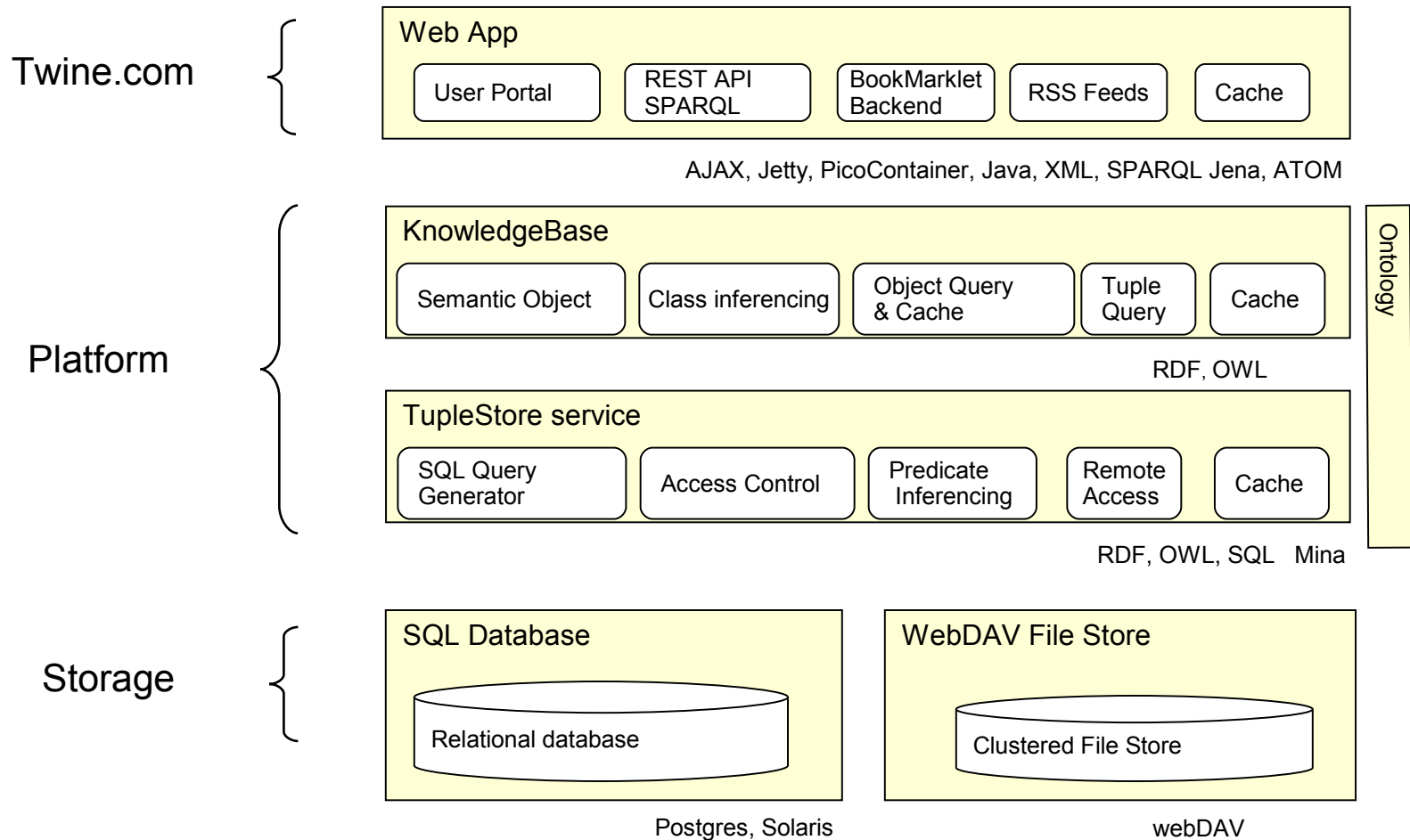
Twine: Building a Consumer Web Semantic Application Based on Java Technology

Lew Tucker, CTO, Radar Networks

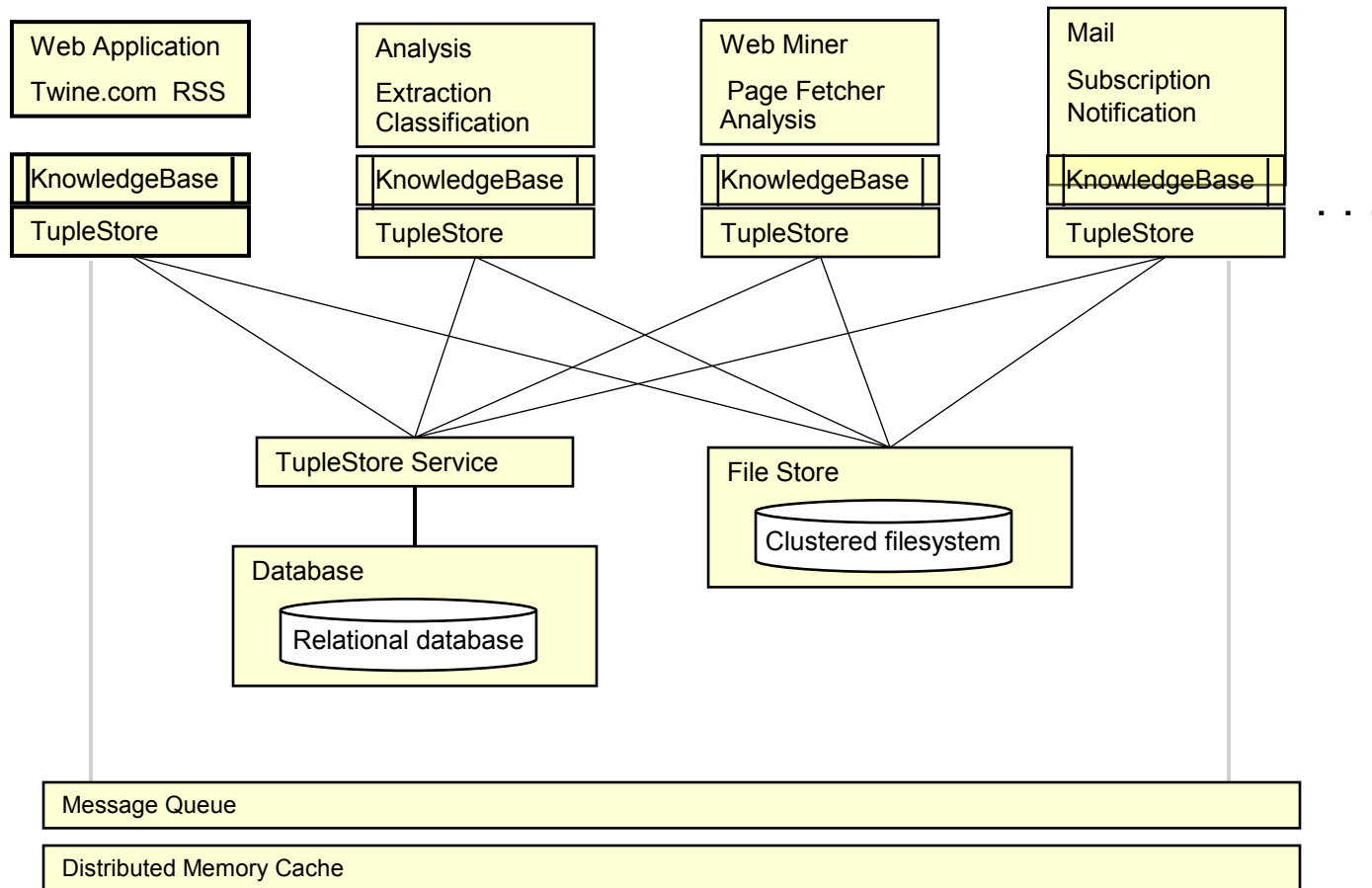
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Twine Software Stack



Loosely coupled services





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Event Handling and Activity Recognition With AllegroGraph

Jans Aasman, CEO

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Activity Recognition

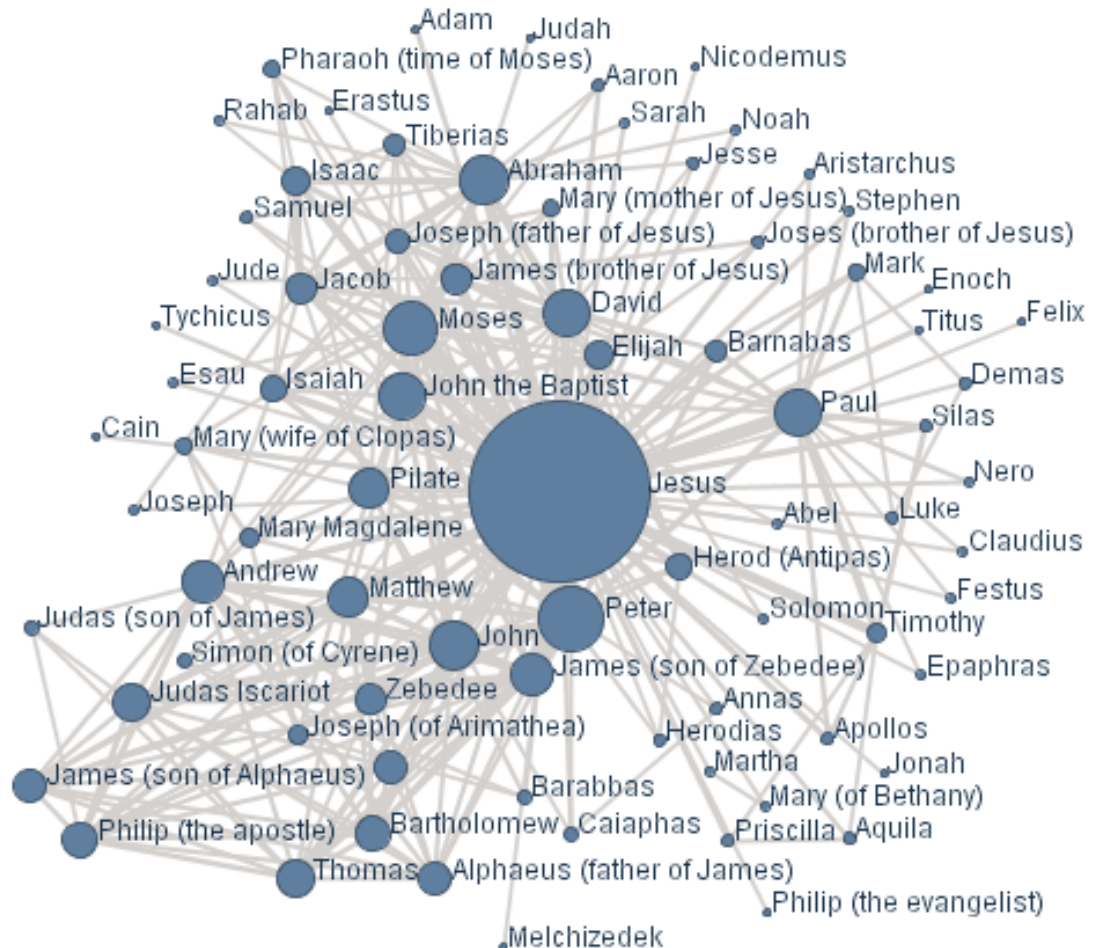
- Our customers use AllegroGraph as an event database with social network analysis and geospatial and temporal reasoning

Find all meetings that happened in December within 5 miles of Berkeley that was attended by the most important person in Jans' friends and friends of friends.

<code>(select (?x)</code>	
<code> (ego-group !person:jans knows ?group 2)</code>	SNA
<code> (actor-centrality-members ?group knows ?x ?num)</code>	SNA
<code> (q ?event !fr:actor ?x)</code>	DB Lookup
<code> (qs ?event !rdf:type !fr:Meeting)</code>	RDFS Reasoning
<code> (interval-during ?event "2007-12-01" "2007-12-31")</code>	Temporal
<code> (geo-box-around !geoname:Berkeley ?event 5 miles)</code>	Spatial
<code>!)</code>	

Social Network Analysis Answers 4 Questions

- How far is P1 from P2
(and how strong is the relation?)
- To what groups does
this person belong
(ego groups, cliques?)
- How important is this
person in the group?
- Does this group have
a leader, how cohesive
is it?





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“Where did I put that receipt?” Managing customer product information using the Semantic Web

Dean Allemang, Chief Scientist, TopQuadrant

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A major catalog/brick&mortar retailer wants to break into online shopping



source: Money magazine

- *Service Contracts*
- *Replacement Parts list*
- *Guarantees/Warranties*
- *Payment records (loans)*
- *Compatibility information*
- *Purchase records (receipts)*

➤ What can we do that amazon, ebay, etc. can't?

- We have reputation for customer service (going back to my grandfather!)
- We own the catalog!

➤ Answer: We will help you manage all the things in your home



No more shoeboxes!!

Applicability of Semantic Web technology

➤ An Information Management System

- Manage several 'tables'
 - RDFS provides a distributed representation of schema
- Allow 'tables' to extend/reuse one another
 - RDFS/OWL allows one class to refer to another
- Allow new tables to be added without impacting current info
 - RDF allows for distributed extension
- Edit and manage forms
- Align forms with schema
 - TopBraid Composer lets users build forms based on RDFS schemas
- Present forms/displays to users
 - Forms are exported in RDF, XML, JSON, etc. for use by web developer

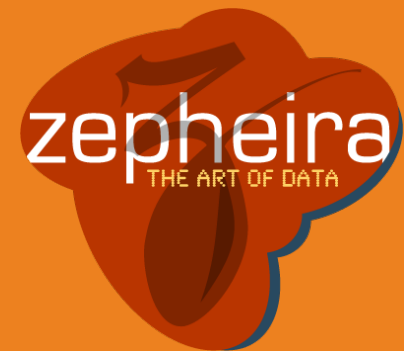


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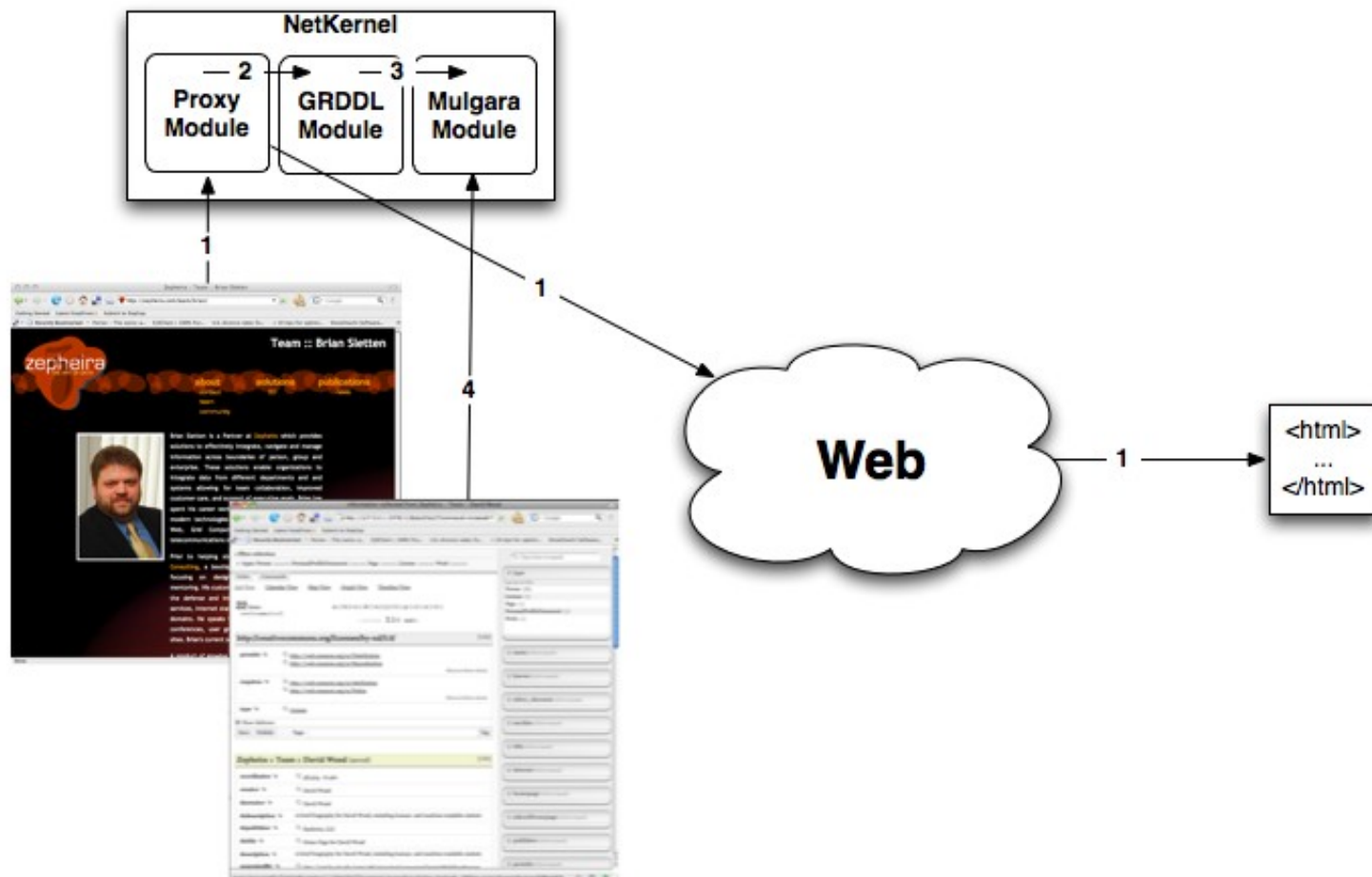
Passively Harvesting Metadata w/ Java Technology-based Tools and Languages

Brian Sletten, Partner, Zepheira

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Architecture



Java Platform Tooling

➤ NetKernel

- Resource-oriented environment
- Logical bindings

➤ Java platform, JavaScript™ programming language, Ruby, Python (anything that runs on JVM machine)

- Scalable to multi-core/multi-CPU hardware

➤ Mulgara

- Scalable RDF triplestore
- ~500 million triples

➤ Longwell

- Faceted Browser