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**SIGMOD 2005**

**EI Panel Talking Points**



# Talking Points

- ❧ EII is Dead, Long Live EII!
- ❧ The “Semantics People”
- ❧ Semantics! (or else...)
- ❧ Semantics! (yes, but...)
- ❧ The (Enterprise) Semantic Web
- ❧ Interoperate, Not Integrate
- ❧ Unabashed Predictions



# EII is Dead, Long Live EII!

The core EII capabilities...

[optimized federated query,  
management of data views,  
management of x-form metadata]

...are a **necessary and fundamental** aspect of successful integration – *and* they are quickly **being subsumed** within traditional RDBMS and EAI toolkits.



## The “Semantic People”

We (Cerebra) are here today as the requisite “semantics people” on the panel. Although we are much more balanced in real life, we tend to be “semantic zealots” when we appear on industry panels... BUT, we are measured in our advocacy because we know that OWL/RDF are not silver bullets!



# Semantics! (or else...)

Without further ado...

...unless the integration industry broadly adopts a standard and formal solution for describing data semantics, customers will:

- ☛ Suffer perpetual vendor lock-in
- ☛ Face ongoing barriers to change
- ☛ Code and recode SQL/Views/Java/XSLT...
- ☛ Forced to predict the future (in code)
- ☛ Never achieve dynamic discovery, loose-coupling, or adaptive data management



# Semantics! (yes, but...)

- ❧ Why now? Are Semantics New?
  - ❧ They're not new, historically we've just implied data meaning procedurally (in code)
- ❧ Aren't "RDB views" semantics?
  - ❧ Sort of, but the operational meaning of the data is ultimately tied to SQL and application tiers (eg: relational algebra is not descriptive enough)
- ❧ Aren't "meanings" a people thing?
  - ❧ This is besides the point, we're talking semantics for machine/software interpretability of data
- ❧ Doesn't EII Solve This Somehow?
  - ❧ In the same way as RDB/XML + proprietary metadata (no)
- ❧ Can't EII Just Use New/Better Schema?
  - ❧ Without the ability to dynamically categorize data (inference), new schemas (even ontology) are static



# (Enterprise) Semantic Web

- ❧ Not Your Grandchildren's Semantic Web
  - ❧ Focus on the application of semantic technologies for smaller (than the Internet) domains – today
- ❧ Ground it in W3C Standard Languages
  - ❧ RDF – Core metadata language based on “triples”
  - ❧ OWL – Core schema/ontology format; logic-based
- ❧ Provide Fundamentally Different Benefits
  - ❧ Reclassify data on the fly (according to context)
  - ❧ Discover/find data without using a “where” clause
  - ❧ Enable a native federation of models – URI links
  - ❧ Automate data behavior as it is repurposed
    - Ontologies are a declarative logic, not just schema



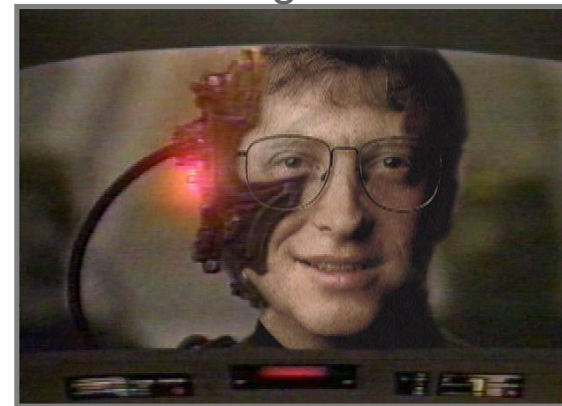
# Interoperate, not Integrate

Interoperate



...or

Integrate



Interoperate

Biz Rule Stmtns  
OWL Ontology  
RDF Graph Data  
(declarative)

...or

Integrate

Java DAO's  
SQL/PLSQL  
RDB Views  
XML/XSLT



# Interoperate, not Integrate

## More Than Word Games...

- The need to integrate a system (sometimes desirable) is profoundly different than a need to interoperate.

<b>Interoperability</b>	<b>Autonomy</b>	<b>Assimilation</b>	<b>Integration</b>
	<b>Loosely-Coupled</b>	<b>Brittle</b>	
	<b>Sharing</b>	<b>Conforming</b>	
	<b>Local Vocabulary</b>	<b>Standard Vocabulary</b>	
	<b>Ontology &amp; Graphs</b>	<b>Scripts, Functions, Code</b>	
	<b>Concrete &amp; Conceptual</b>	<b>Concrete</b>	



# Unabashed Predictions

- ❧ Ell will adopt a “semantics-centric” approach to live up to its hype –or- Ell will be folded into existing technology bases like RDB or EAI as add-on capabilities.
- ❧ OWL/RDF standards will augment, not replace current Ell platforms – especially for shared metadata and dynamic views
- ❧ Through 2007, 20% of Fortune 1000 companies will adopt a “semantic consistency” layer for their SOA deployments  
*(okay, okay, we stole that one from Gartner)*



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