

Semantics for Enterprise Application Visibility

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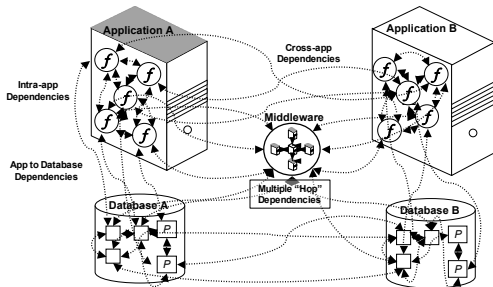
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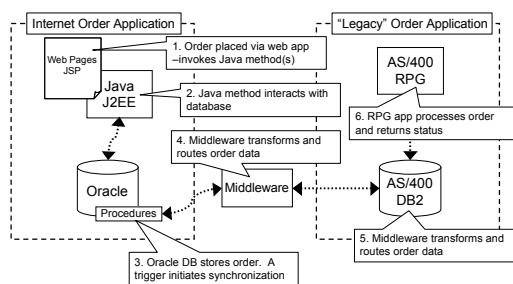
The average \$3B Fortune 1000 company...

- Has hundreds of software applications
 - Most of which use different business dictionaries (loosely - taxonomies)
 - Multiple technologies (programming languages, packaged applications, databases, middleware)
 - Millions of lines of source code, database tables/columns, etc.
 - Multiple metadata repositories
 - Tens of millions of individual components (functions, variables, DB columns, etc.)
- Spends \$105 (70% of total budget) million maintaining those apps
- Has very little visibility into the apps on which they spend:
 - What they comprise and how they're interconnected
 - What software artifacts relate to business drivers and terms
 - How the 'guts' are, or can be, leveraged to meet business needs
- Lack of this kind of visibility is:
 - A major barrier to IT agility, a driver of cost and a contributor to risk
 - Solved through Automated Semantics

Why is this so difficult?



A True Case Study: Seemingly Simple Composite App



Ends up in Complex Human Integration

- 1 Simple Composite Application
- 6 Technology Layers, supported by multiple roles & groups

JSP for web pages	Java for order processing	Oracle for storage and triggers	Middleware for trans. and messaging	AS/400 DB2 for storage	AS/400 RPG for order processing
Repeat: All using different terminologies for business concepts.					
Web Developers	Java Developers	Oracle DBAs	Middleware DBAs	RPG DBAs	RPG developers
Distributed Systems Architect Development Manager Quality Assurance			Architect	AS/400 Architect Development Manager Quality Assurance	
Enterprise Architect Quality Assurance Business Analyst IT Executive					

Semantic Reconciliation today...

1. Architects and/or business analysts must determine where information is stored, and which applications touch it
2. Developers from each application must locate appropriate source files and manually scan code to determine which parts of the application touch the information concepts and data
3. Software code must be reverse-engineered and traced to determine dependencies across the entire application stack

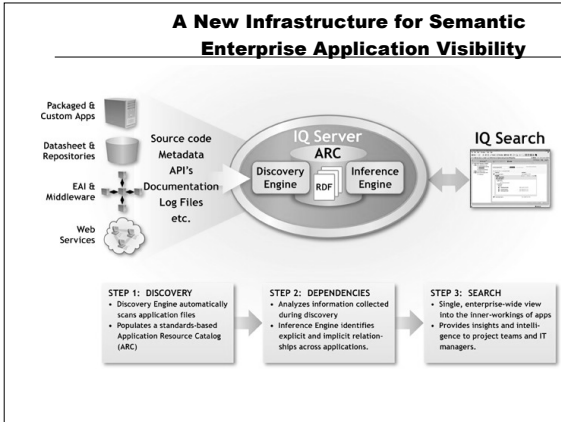
Time Consuming

- Multiple resources involved
- Simple impact analysis takes days or weeks

Error Prone

- Mistakes caught by QA are 10X more expensive
- Mistakes not caught by QA can result in system downtime

Now let's see how Semantics helps...



- ### A Simple Use Case: Application Maintenance
- To align with a change in business practices, we need to make a change our Invoicing models.
 - While one person may know that, for instance, there's some Invoice info in a DB2 database table called "TI001"
 - What we really need to need to know:
 - Where is the exhaustive list of application areas in which the concept "Invoice" is actually stored, used and manipulated?
 - What other components are impacted if we change any of it?

Live Demonstration!

(time and facilities permitting...)

- ### Real World Use Cases for Semantics
- Modification /Enhancement
 - Break / Fix
 - QA & Testing
 - Audit (for compliance, etc.)
 - Re-use
 - Enterprise architecture design
 - Migration / Modernization
- Find** the parts of applications that are relevant to the task
 - Understand** how they are put together (dependencies, etc.)
 - Determine** the impact of changes

- ### Summary – Solving Enterprise App. Visibility
- Real, usable and immediate visibility
 - Resolves the hairball of the ever-growing software sprawl.
 - Empowers Architect with real-time, dynamically updated knowledge
 - Handles the truly boring stuff – automatically
 - Auto-reconciliation of disparate dictionaries / taxonomies
 - Tracking dependencies and relationships between it all.
 - Software terms, data terms, human words, business terms, functions, variables, etc. etc. etc.**
 - *Actually* helps Enterprise IT do more with less

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