Service Oriented Architecture:
An Overview Discussion

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What is SOA?

SOA is not a thing ...

- It’s a set of principles and best practices

Attributes of SOA

- Loosely coupled, Course Grained
- Service Discovery, Mediation, Network Interop
- Declarative - Writing code should not drive SOA

• “Haven’t I heard this before?”
  - Yes – the term “SOA” has been around for about 10 or so years
  - Yes – the concepts have been around for 20 years
  - “Service-based Component Architectures” have been around for about 8 or so years (e.g. J2EE and .NET)
  - So what is the big deal? Not everyone does SOA the same.
Enabling Technology

HTTP
- Ubiquitous transport protocol

J2EE and/or .NET
- Scalable/reliable Service-based component server

Business Process Management
- GUI driven process development and automated execution

Web Portal
- Ubiquitous application surfacing

XML and SOAP
- Ubiquitous message encoding format ... it’s about time

WebServices
- Ubiquitous RPC over the web ... almost.

Enterprise Services Bus
Technology Convergence

Whole is greater than the sum of its parts

Technology Convergence manifest in Application Platform Suite (APS)

Truly enables the Gartner mantra

- “Implement tactically, but plan strategically”

Enabling Technology + SOA Architecture + APS

- The tools and the architecture do the heavy lifting around de-centralized computing
- Integration is no longer the “long pole in the tent”
- Developers are free to focus on business problems
## SOA: A Paradigm Shift

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## Putting Your Arms Around “SOA”

### Service Enablement
- Adapters (JCA)
- Virtual Data Views
- XML
- Web Services
- Resource Access
- Existing Services
- Web Applications
- Portlets (WSRP)
- Portals
- B2B Apps
- Mobile Devices

### Service Orchestration
- Human Workflow
- Business User Tools
- Processes
- Data Mapping
- Composite Services
- Process Monitoring
- Service Broker
- JMS Services
- Advanced Message Brokering
- Web Services Management
- Distributed Messaging

### Service Consumption
The Enterprise Service Bus
Messaging and WSM Challenges in SOA
What are people doing with SOA?

• Commercial Sector
  ▪ Financial Services
    ▪ Wells Fargo – Consolidated Customer Service Systems
    ▪ Citi Group – Money Laundering Detection Systems
    ▪ CapitalOne – Insertion of loosely-coupled integration hub
  ▪ BioPharma
    ▪ Pfizer – reorganization of IT assets into SOA
What are people doing with SOA?

- **Government Sector**
  - DoD
    - DISA – NCES (Net Centric Enterprise Services)
      - Providing core services and infrastructure for next-gen combat environment
  - Dept of Homeland Security
    - DHS – eMerge2
      - Consolidating all of the financial systems of the Dept of Homeland Security
    - DHS – US Visit
      - New system to re-invent how people are tracked coming in and out of the US
Current Challenges

• SOA Governance
  ▪ How do I control risk?
  ▪ How do I re-align the cost model?
  ▪ How do I manage the network on a service basis?

• Service Enablement
  ▪ What systems do we Service Enable?
  ▪ Do we build composite apps and then enable those as services?
  ▪ Who is responsible for doing the work?

• True Understanding of Implications
  ▪ A) Organizations **do not** understand full implications
  ▪ B) Organizations **do** understand full implications