



Service-Oriented Enterprise Architecture

Integrating SOA into EA

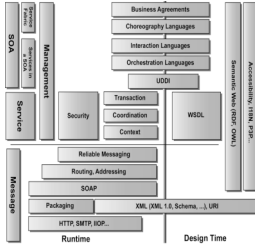
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Enterprise Architect Summit 2005

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Agenda

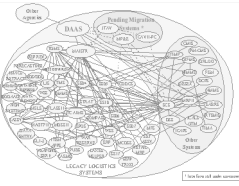
- Enterprise Architecture
 - Complexity, space and time
 - EA in one page
- Service-oriented Enterprise Architecture
 - No WS is an island
 - Reuse = Services = Reuse
- SEA Best Practices
 - Design for reuse
 - Visibility
 - Common Services
 - Metadata
 - Marketing
 - Governance




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5 Dimensions of Software Complexity

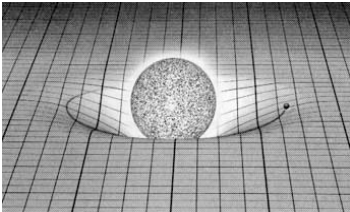
- Complexity as primary constraint on software
 - 1000x increase across 5 dimensions
 - Interface
 - Stakeholders
 - Size
 - 27k vs. 39k
 - [VisiCalc vs. eula10r.chm](#)
 - Platforms
 - Network
- Complexity requires a plan
- EA is that plan




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EA Spans Space


- Project teams see only the **here**
- EA provides enterprise perspective




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EA Spans Time


- Project teams see only the **now**
- EA utilizes the past and optimizes the future



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Agile Enterprise Architecture

Category	Asset	Req	Enforcement	Scope	Business Case	Effective Date
Security	LDAP	Y	Review board	N	Business Unit	SOX 1/1/2005
Database	Oracle	N	Presumed	Y	Enterprise	Enterprise License 12/1/2001
Customer Lookup	lookup .wsdl	Y	Audit	Y	XYZ Line of Business	Unified Customer View 3/1/2007

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SEA Not SOA

- Wide range of IT assets
 - WSDL, XSD, XSLT
- All are reusable
- WS don't exist in isolation

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SEA Enables Reuse

- Productivity Gains
 - 10-40%
- Lower maintenance costs
 - 10-100%
- Improved quality
 - n x number of uses
- Reduced complexity
 - 1:1
- Increased agility
 - n-1
- Wiederaufbereitung

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SEA Best Practices Design for Reuse

- Platforms → Objects → Components → Services
- Similar rules apply
 - High cohesion
 - Loose coupling
 - MYOB
 - Extensible
 - Tested
 - QoS
 - Documented
 - Usage examples
 - Commercial quality
 - Standards
 - Tested
 - No extensions

Reusable Design: From atom to galaxies

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SEA Best Practices Visibility

- Web service ~ Business process
 - Engage the business
- Asset registry
 - Easily accessible
- Enhanced Metadata
 - UDDI plus
- Marketing and PR

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SEA Best Practices Common Services

- Shared Services
 - Single most effective practice
- Infrastructure
 - Start low and work up
- Web Services
 - New IT plumbing
 - Commoditizes all hardware platforms

From The Practice of Local Government Planning by the International City Management Association American Planning Association (1975) © 2005 Flashline, Inc.

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SEA Best Practices: Enhanced Metadata...

Development Information	<ul style="list-style-type: none"> Platform Requirements Constraints Transactions & responses Data descriptions Performance characteristics User reviews Affinity Service Level Agreement 	Support Information	<ul style="list-style-type: none"> Managed services hosts Transactional hosts Communication methods Usage histories
Development Documentation	<ul style="list-style-type: none"> Application builders guide Installation instructions Sample code WSDL 	Support Documentation	<ul style="list-style-type: none"> Maintenance instructions Design documents Models Release notes
Key Relationships	<ul style="list-style-type: none"> Links to UDDI directories Previous & next versions Related assets Required assets, environments, processes 	Testing Artifacts	<ul style="list-style-type: none"> Client-server unit test Load test results Test harness Test scripts Test results
Categorization	<ul style="list-style-type: none"> Function Certification level Line of business 	Reports	<ul style="list-style-type: none"> Service reuse Usage by developer Submissions

SEA Best Practices Marketing

- SEA requires marketing
 - Portal, email, etc.
- Pick easy wins
 - Wrap legacy
- Tout successes
- Industry success stories
 - Competitors
- Tie to business goals



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SEA Best Practices Governance

- Points of control
 - Funding
 - Access / provisioning
 - XML = corporate data
 - The biggest mistake we see is failure to control schema proliferation
- Web Services Competency Center
 - Architecture review board
 - Manage the Schemas
- Feedback loops
 - Bi-directional

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Summary

1. Enormous potential for good
 - SEA=Better, faster AND cheaper
 - You really can have all three
2. Some control is essential
 - Can't develop or manage in isolation
3. Combine SEA with business process reengineering for maximum benefit

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