Open Group Service Integration Maturity Model (OSIMM)
7/21/09

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IBM Distinguished Engineer
OSIMM WG Lead
Evolution of OSIMM

- Submitted SIMM top level model to the Open Group in 2006 as OSIMM.

- Early 2007 was decided to allow other SOA activities catch up with OSIMM

- Work group scaled back until recently as industry/members gained additional experience

- Work continued on OSIMM in 10/08
OSIMM Background
What if...

- Businesses adopting SOA could assess their service and SOA maturity levels to accelerate their transformation?

- SOA vendors could more rigorously demonstrate how their solutions help transform an organization towards greater service maturity?

- SOA architects had an maturity model, adoption and transformation guidance to shape the architectural strategy for service and SOA transformation across multiple dimensions?
What Are We Announcing

- Standardization of the Open Group Service Integration Maturity Model (OSIMM)
  - Provides ability to assess
    - Current maturity
    - Determine and design path to Future desired maturity
  - Across 7 dimensions (business down to infrastructure)
  - Applicable from pre-SOA, to currently established SOA projects through future horizon directions

- The industry’s first collaborative maturity model for providing guidance on SOA adoption, transformation and maturity

- Spearheaded by members of The Open Group SOA WG, including IBM, BEA, HP, EDS, Capgemini and other members of the SOA Working group

- Starting point for the standardization effort was seeded from papers written by IBM on SOA maturity and other member contributions
  - Based on numerous service engagement experiences
Open Group Service Integration Maturity Model (OSIMM)

- Establish . . . An industry leading service integration maturity model
- Establish . . . Benchmarks and criteria for measuring SOA maturity
- Leverage . . . Experience of leading practitioners
OSIMM Standard
What is OSIMM?

- Service integration maturity model
- An extensible maturity framework
- A process for maturity assessment
OSIMM helps define a roadmap for incremental IT transformation linked to business transformation
### OSIMM Maturity Matrix

<table>
<thead>
<tr>
<th>Service Foundation Levels</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Silo</td>
<td>Integrated</td>
<td>Componentized</td>
<td>Services</td>
<td>Composite Services</td>
<td>Virtualized Services</td>
<td>Dynamically Re-Configurable Services</td>
<td></td>
</tr>
<tr>
<td>Business View</td>
<td>Isolated Business Line Driven</td>
<td>Business Process Integration</td>
<td>Componentized Business Functions</td>
<td>Business provides &amp; consumes services</td>
<td>Composed Business Services</td>
<td>Outsourced Services BPM &amp; BAM</td>
<td></td>
</tr>
<tr>
<td>Governance &amp; Organization</td>
<td>Ad hoc LOB IT Strategy and Governance</td>
<td>Object Oriented Modeling</td>
<td>Common Governance Processes</td>
<td>Emerging SOA governance</td>
<td>SOA and IT Governance Alignment</td>
<td>SOA and IT Infrastructure Governance alignment</td>
<td></td>
</tr>
<tr>
<td>Methods</td>
<td>Structured Analysis &amp; Design</td>
<td>Object Oriented Modeling</td>
<td>Component Based Development</td>
<td>Service Oriented Modeling</td>
<td>Service Oriented Modeling</td>
<td>Service Oriented Modeling for Infrastructure</td>
<td></td>
</tr>
<tr>
<td>Applications</td>
<td>Modules</td>
<td>Objects</td>
<td>Components</td>
<td>Services</td>
<td>Applications comprised of composite services</td>
<td>Process Integration via Service</td>
<td></td>
</tr>
<tr>
<td>Architecture</td>
<td>Monolithic Architecture</td>
<td>Layered Architecture</td>
<td>Component Architecture</td>
<td>Emerging SOA</td>
<td>SOA</td>
<td>Grid Enabled SOA</td>
<td></td>
</tr>
<tr>
<td>Information</td>
<td>Application Specific Data Solution</td>
<td>LOB Specific (Data subject areas established)</td>
<td>Canonical Models.</td>
<td>Information as a Service</td>
<td>Enterprise Business Data Dictionary &amp; Repository</td>
<td>Virtualized Data Services</td>
<td></td>
</tr>
<tr>
<td>Infrastructure &amp; Management</td>
<td>LOB Platform Specific Level 1</td>
<td>Enterprise Standards Level 2</td>
<td>Common Reusable Infrastructure Level 3</td>
<td>Project Based SOA Environment Level 4</td>
<td>Common SOA Environment Level 5</td>
<td>Virtual SOA Environment: Sense and Respond Level 6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Context-aware Event-based: Sense &amp; Respond Level 7</td>
<td></td>
</tr>
</tbody>
</table>

**Legend:**
- Silo: Business provides & consumes services
- Integrated: Componentized Business Functions
- Componentized: Emerging SOA governance
- Services: SOA and IT Governance Alignment
- Composite Services: SOA and IT Infrastructure Governance alignment
- Virtualized Services: Governance via Policy
- Dynamically Re-Configurable Services: Business Process Modeling
- Isolated Business Line Driven: Business capabilities via context aware services
- Business Process Integration: Dynamic Application Assembly
- Componentized Business Functions: Process Integration via Service
- Common Governance Processes: Dynamically Re-Configurable Architecture
- Service Oriented Modeling: Semantic Data Vocabularies
- Component Based Development: Virtualized Data Services
- Service Oriented Modeling for Infrastructure: Context-aware Event-based: Sense & Respond
- Applications comprised of composite services: Sense & Respond
- Common SOA Environment: Level 6
- Virtual SOA Environment: Sense and Respond Level 7
- Context-aware Event-based: Sense & Respond Level 7
### OSIMM Maturity Matrix - Dimensions

#### Service Foundation Levels

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
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<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Silo</td>
<td>4</td>
<td>Services</td>
</tr>
<tr>
<td>2</td>
<td>Integrated</td>
<td>5</td>
<td>Composite Services</td>
</tr>
<tr>
<td>3</td>
<td>Componentized</td>
<td>6</td>
<td>Virtualized Services</td>
</tr>
<tr>
<td>7</td>
<td>Dynamically Re-Configurable Services</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Business View
- Business Process Integration
- Componentized Business Functions
- Business provides & consumes services
- Composed Business Services
- Outsourced Services BPM & BAM
- Business capabilities via context aware services

#### Governance & Organization
- Object Oriented Modeling
- Common Governance Processes
- Emerging SOA governance
- SOA and IT Governance Alignment
- SOA and IT Infrastructure Governance alignment
- Governance via Policy

#### Methods
- Object Oriented Modeling
- Component Based Development
- Service Oriented Modeling
- Service Oriented Modeling
- Service Oriented Modeling for Infrastructure
- Business Process Modeling

#### Applications
- Objects
- Components
- Services
- Applications comprised of composite services
- Process Integration via Service
- Dynamic Application Assembly

#### Architecture
- Layered Architecture
- Component Architecture
- Emerging SOA
- SOA
- Grid Enabled SOA
- Dynamically Re-Configurable Architecture

#### Information
- LOB Specific Subject Areas (established)
- Canonical Models.
- Information as a Service
- Enterprise Business Data Dictionary & Repository
- Virtualized Data Services
- Semantic Data Vocabularies

#### Infrastructure & Management
- Enterprise Standards
- Common reusable infrastructure
- Project Based SOA Environment
- Common SOA Environment
- Virtual SOA Environment: Sense and Respond
- Context-aware Event-based: Sense & Respond

#### Level 1

#### Level 2

#### Level 3

#### Level 4

#### Level 5

#### Level 6

#### Level 7
OSIMM Dimensions
Business Dimension

- Focused on the Business Architecture
- How the business process are designed, structured and implemented
- Cost model used for deploying business functions within IT
- Effectiveness of IT to support the business performance indicators
- Ability of the IT operational environment to support a flexible business process
Organization and Governance Dimension

- Structure and design of the organization
- Effective service governance
- Organizational structure necessary to effectively adopt services
- Formal processes that govern the implementation and deployment of services
- Ensure alignment with business needs
Method Dimension

- Methods, process and tooling used to deploy services
- Maturity of service development lifecycle
- Skills of the organization necessary to effectively adopt a service method
Applications Dimension

- Service application style and the structure of the application
- Functional decomposition, reusability, flexibility, reliability and extensibility of the applications
- Use of best practices and patterns
- Structure of applications across the enterprise
Architecture Dimension

- Structure of the architecture across the enterprise
- Topology of the applications
- Application integration techniques
- Sophistication of the service architecture
**Information Dimension**

- Structure of the information necessary to support services
- Method in which services accesses information – use of Master Data Service
- Structure of the business information model
- Type of content services – method of content access
• Service management practices
• Ability to monitor business process and tie to service operations
• Service management tied to service level monitoring and SLA’s
• Type of integration platform
OSIMM Assessment
## Maturity Indicators and Attributes

A SOA maturity assessment of the OSIMM Business Dimension is conducted by identifying the formal definition and documentation of the organization’s business drivers and processes.

### Maturity Indicators for the Business Dimension

<table>
<thead>
<tr>
<th>Maturity Level Cell Name</th>
<th>Maturity Indicator</th>
<th>Maturity Attributes</th>
<th>Maturity Weighting</th>
<th>Assessment Question Mapping</th>
</tr>
</thead>
<tbody>
<tr>
<td>Componentized (Level 3) Componentized Business</td>
<td>Formal definition and documentation of the organization’s business drivers and processes.</td>
<td>Cross-organizational&lt;br&gt;Some formal Enterprise Architecture constructs exist&lt;br&gt;Organizations business drivers are documented as cross organizational business objectives.</td>
<td>30</td>
<td>15, 16&lt;br&gt;1, 2, 9, 17, 18, 19</td>
</tr>
<tr>
<td>Services (Level 4) Componentized Business Provides and Consumes Services</td>
<td>Formal definition and documentation of the organization’s business drivers and processes.</td>
<td>Enterprise-wide&lt;br&gt;Formal use of Enterprise Architecture&lt;br&gt;Organizations business drivers are documented as elements of the Enterprise Mission and Business Architecture</td>
<td>40</td>
<td>3, 15, 16&lt;br&gt;1, 2, 3, 8, 9, 10, 11, 17, 18, 19</td>
</tr>
</tbody>
</table>

**Maturity Indicator:**
- A Service capability of the business or IT organization.
- Associated with a specific service maturity dimension at a specific level of maturity.
- Focus of the assessment

**Maturity Attribute:**
- An observed characteristic of a maturity indicator.
- Maturity attributes are observed capabilities of the target assessment organization.
Assessment Questions

3.2 Business Dimension - Assessment Questions

The following assessment questions help elicit information on how an organization formally defines and documents their business drivers and processes. By gathering information using these assessment questions an assessor can map a maturity indicator to the associated maturity attributes thereby determining the business dimension maturity level.

1. What are the major business drivers for this initiative?
2. What is the business vision and goals and how are these related to what IT is currently doing?
3. Is your current Business Process Architecture formally defined, documented and governed?
4. Is your Business Process Architecture complete & up to date?
5. How are metrics for return on investment measured in Business Process Management?
6. How agile are your current business processes?

Assessment Questions:
- Questions that are used to gather information about an organizations service practices.
- Used to map to maturity attributes for each maturity indicator.
- Results in a maturity scoring

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</tr>
</thead>
<tbody>
<tr>
<td>Siloed (Level 1)</td>
<td>Formal definition and documentation of the organization’s business drivers and processes.</td>
<td>Low or Nonexistent</td>
<td>10</td>
<td>2, 3</td>
</tr>
</tbody>
</table>
Assessment Process

Organization

Assessor

Provides Input

Provides Input

Determine

Determine

Input

Input

Input

Desired Maturity Level

AS-IS Maturity Level

Assessment Report

EA, Strategy and Pain Points

Maturity Indicators

Provides Input

Determine

Input

Input

Input

Desired Maturity Level

AS-IS Maturity Level

Assessment Report
Future Directions

- OSIMM Customer Case Repository
  - Customer case studies
  - Best Practices

- Maturity Indicatory Catalog
  - Additional maturity indicators and attributes
  - By Industry, Geo
Benefits for the Industry

- “This unified industry view of SOA maturity will provide enterprises with a consistent model and terminology that will help advance SOA adoption within their organizations.” - Dr. Chris Harding, forum director for SOA and semantic interoperability at The Open Group.

- “We are committed to creating standards such as the Open Group Service Integration Maturity Model that will help our clients to benefit more and more from SOA.” - Ron Tolido, Chief Technology Officer, Capgemini Continental Europe and Asia Pacific.

- “The Open Group Service Integration Maturity Model will help companies create a roadmap for their transformation journey to SOA and better enable vendors to deliver services and software in line with increasingly well-established benchmarks.” – Dr. Ali Arsanjani, Chief Architect, SOA Center of Excellence, IBM

- “The OSIMM standard will provide a flexible framework for evaluating an organizations service and SOA maturity. This flexibility will facilitate industry and cultural adoption of SOA and OSIMM” - Andras R. Szakal, IBM Distinguished Engineer and OSIMM WG Chair
What Are We Announcing: Review

- Standardization of the Open Group Service Integration Maturity Model (OSIMM)

- Industry’s first collaborative maturity model for SOA adoption, transformation and maturity.

- For more information:
  - www.opengroup.org/overview/
  - www.opengroup.org/projects/osimm/
Thank You
The Open Group

The Open Group is a vendor-and technology-neutral consortium, whose vision of Boundaryless Information Flow™ will enable access to integrated information within and between enterprises based on open standards and global interoperability. The Open Group works with customers, suppliers, consortia and other standard bodies to:

- Develop open industry IT standards
- Capture, understand and address current and emerging requirements, establish policies and share best practices
- Facilitate interoperability, develop consensus, and evolve and integrate specifications and open source technologies
- Offer a comprehensive set of services to enhance the operational efficiency of consortia
- Operate the industry’s premier certification service

More information: www.opengroup.org/overview/what-we-do.htm
The Open Group

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  - Operate the industry’s premier certification service

- Vision of Boundaryless Information Flow™ – with enterprise architecture as a critical element for making the vision a reality, the TOGAF Architecture Development Method (ADM) provides an important toolset

- “Making Standards Work™” – extensive experience and track record in facilitating consensus to develop standards and operating a premier certification service

Architecture Practitioner Conferences

Core Technology
- LDAP / CCI
- MILS
- AQRM
- Motif®
- DCE (Open DCE)
- DRDA®

Forums
- Architecture
- Platform
- Jericho & Security
- Identity Management
- Enterprise Management
- Real Time and Embedded Systems

Certifications
- UNIX
- LDAP
- WAP
- S/MIME
- ITAC / ITSC
- NASPL

Methods & Best Practices
- TOGAF
- SOA-WG

IBM SOA Standards
Why The Open Group?

- The Open Group's membership, made up from large customer organizations, vendors and smaller consultants, reacted very positively to the proposal within the TOG SOA Working Group.

- Other organizations have shown interest in this issue, but none has attracted the breadth of participation and completeness in scope that has been seen in The Open Group.

- The proven record of The Open Group in developing methods and **best practices** (consulting standards) adds significantly to the viability of the proposal.

- Most aligned with SOA industry directions...