Building a Service Oriented Architecture with BPM and MDA® Workshop

Burlingame, CA, USA   -   October 16-19, 2006

Workshop Program

Monday – October 16, 2006

TUTORIALS:

0900-1230   **Track 1:** *Introduction to the MDA, Unified Modeling Language™ and their Applicability to SOA*
Jim Amsden, Senior Software Engineer, IBM

This half-day tutorial is an MDA case study in the context of UML and SOA. It starts with an introduction to OMG's MDA and the foundation modeling specifications enabling transformations that support it. We'll discuss what MDA is, how it works, and the benefits to both the business and technical aspects of application development and integration. We'll follow this with an overview of UML2 with particular emphasis new features and how they facilitate MDA. In the second half of the session we'll see how to apply MDA to model business services in UML and transform them to Web Services using an SOA.

0900-1230   **Track 2:** *Service-Oriented Architecture and Web Services*
Don Adams, VP, Chief Security Officer, CTO, Worldwide Public Sector, TIBCO Software Inc.
Rourke McNamara, Senior Product Marketing Manager, SOA, TIBCO Software Inc.

This half-day tutorial focuses on the pragmatics of employing services in the enterprise. We will discuss the best practices for incorporating SOA into existing enterprise architectures and illustrate them with real industry examples. We will discuss criteria for deciding where services make sense and choosing appropriate standards. We will talk about how to cope with standards evolution in today's projects. We will discuss the organizational issues that hinder service development and practical techniques for coping with them. We will conclude by exploring the importance of establishing and meeting management expectations in order to sustain the investment in SOA.

1030-1045   Morning Refreshments

1230-1330   Lunch

1330-1700   **Track 1:** *Identifying and Planning Services Within Policy Framework*
John C. Butler, Chief Architect, Everware-CBDI
David Sprott, Principal Consultant, CBDI Forum

This tutorial focuses on the intersection between the business process and implementation views. The session will introduce a methodology for identifying and planning services within a policy framework – based on a taxonomy and classification system that allows an organization to have consistency of approach. The methodology provides clear guidance on techniques and policies that are applicable to process, domain and utility services. The outcome is a well defined set of business requirements that can be directly input to component selection and design.

1500-1515   Afternoon Refreshments

1330-1700   **Track 2: *Business Process Modeling Notation***
                 Dr. Stephen White, BPM Architect, IBM

This tutorial introduces business process modeling using the BPMN process modeling standard. This session will show how BPMN can support different methodologies as well as different modeling goals (e.g., orchestration and choreography), using actual business processes as examples. Sample business models will also be presented and explored to illustrate the main concepts and notational innovations. Two short exercises (on paper) will give students the feel of modeling with the major BPMN model elements."

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Tuesday – October 17, 2006

0930-0945   ***Welcome and Opening Remarks***
                 Fred Waskiewicz, Director of Standards, Object Management Group

0945-1045   **Keynote Presentation**
                 The Future of SOA: the Industrialization of Software
                 Judith Hurwitz, President, Hurwitz & Associates

Organizations are beginning to think differently about how they leverage their software assets as critical business enablers. The movement toward SOA will have a profound impact on the strategic role of software. There will be many unintended consequences of SOA that are yet to be understood. For example, the balance of power among software vendors will change. In addition, business leaders will have a much more profound role in the development of software than ever before. We are indeed at the early stages of the industrialization of software. This talk will focus on where SOA is headed and how it will impact organizations over the coming decade.

1045-1100   Morning Refreshments

1100-1200   **Technical Keynote:**
                 Bridging the Gaps Between People, Applications and Systems
                 Shane Pearson, VP-Product Management, BEA Systems

Service-Oriented Architecture (SOA) has emerged as the leading IT strategy for streamlining service delivery, while Business Process Management (BPM) has emerged as a leading strategy for streamlining business delivery. By incorporating BPM solutions into a SOA environment, enterprises can bridge the gap between information, applications, systems and services that greatly impact their ability to measure success and achieve a higher degree of business and IT agility. This keynote presentation will focus on the business and technical trends of defining and managing reusable services and processes to deliver on the benefits of SOA and create new enterprise efficiencies.

1200-1300   Lunch

1300-1445   **Session 1: *Using BPM and MDA to Establish SOA Throughout the Enterprise and Beyond***
                 Chair: Fred Waskiewicz, Director of Standards, Object Management Group

The workshop kicks off with two very different case studies of successful automation of business process by a large enterprise. The first, which integrates process throughout a company so well that it won the Malcolm Baldrige award, highlights the scale that BPM implementations could reach even before the advent of industry standards and vendor tools, while the second shows the difference that standards and tools can make when they're added to an already well-run system. Watch for both of these themes to echo throughout the rest of the workshop.

1300-1345 **Boeing Global Mobility Systems Case Study: Business Process Governance: A Winning Strategy**
David E. Farrar, Associate Technical Fellow, The Boeing Company

When an organization is managed as a collection of processes, it allows process owners to take the organization to new heights through integration, alignment and improvement; especially when customers, both internal and external, are engaged in the joint management of processes. A process focus, as part of a Malcolm Baldrige framework, also facilitates a built-in approach for the incorporation of new improvement initiatives such as ISO and CMMI. Learn how Boeing Global Mobility Systems addresses process management as part of its application of the Baldrige principles and criteria, leading to achievement of the Malcolm Baldrige National Quality Award in 1998 and the California Governor's Award in 2002.

1345-1430 **WDP&R Case Study: Leveraging SOA and MDA to Transform the IT Organization**
Ken Sterling, Manager-Architecture, Walt Disney Theme Parks & Resorts Information Technology

This discussion revolves around a case study showing how MDA is being used to transform a large IT organization into a highly efficient and effective strategic business partner. We have shown on a highly visible, business critical system that MDA significantly reduces the cost and effort for IT delivery, while improving quality and reducing risk. We'll also discuss the reasons why we decided to pursue a SOA and MDA paradigm as our going forward strategy. Finally, we'll briefly touch on lessons learned and organizational issues we have encountered along the way.

1430-1445 Session 1 Q&A and Discussion

1445-1900 *Demonstration Area Open*

1445-1515 Afternoon Refreshments in Demonstration Area

1515-1800 **Session 2: *Best Practice in Design and Implementation of BPM/MDA/SOA***
Chair: Fred Waskiewicz, Director of Standards, Object Management Group

The analysts and architects who model a company's business process will make many decisions as they design the system that automates it, and the shape of the final implementation depends highly on these decisions. In this session, we'll examine some of the criteria that guide experienced designers as they move from BPM analysis through system design.

1515-1600 **Generic BPEL Processes: Integrating Process Design and Execution Based on Generic Reuse and MDA**
Mr. Dirk Staehler, Divisional Director, Opitz Consulting

When it comes to BPM the most important question is to bridge the gap between a business oriented process design and the technical oriented execution. Experience shows that in environments with a high amount of automated back-end processes (e.g. financial institutions, telecommunication and logistics) business and automated processes tend to map in a many-to-one relationship. BPMN is capable of describing the business and the execution oriented views and allows the transformation between them based on MDA techniques. But, the goal has to be an "industrialized" production of processes using one generic BPEL process for many business processes. That means, transferring business content into generic BPEL constructs and orchestrating them at runtime using dynamic binding procedures. The presentation covers the basic concept, background information how to model business and IT-processes with BPMN, usage scenarios to generically link them and most interesting technical tricks to realize generic process automation based on MDA techniques.

1600-1645   **Patterns and Techniques for Separating Business Logic in New SOA System Development**
               Iyad Jabri, President and CEO, Intelliun Corporation

With the increased adoption of SOA and the evolution of standards like Service Component Architecture (SCA), a new challenge arises in the development of software systems. More specifically, deciding where a particular piece of logic (i.e. the implementation of a requirement) belongs: at component implementation, composition or workflow layer. This architectural decision can make a significant difference between reusable components and rigid ones, and between agile systems that can easily adapt to changing business needs and fragile ones. In this presentation, several patterns and techniques are explored to address this challenge starting at defining your target architecture, refining and classifying your system use case, to implementing your business logic. Different approaches are examined for implementing workflow, business rules, component configuration, and user interface.

1645-1730   **The Role of BPM in the SOA Maturity Model**
               Meir Levi, CEO, Interfacing Technologies

Many claim that SOA is the next "industrial revolution" but others dismiss SOA as nothing new. Meir Levi, whose BPM involvement began in the early 90's, sheds light on the promise of SOA and its new differentiation through emerging real life examples. With the powerful pair: BPM & SOA, a quantum leap is expected in EA leading to the drop of the wall between IT and Business. Stepping through both BPM & SOA maturity models, Meir will demonstrate how any Enterprise can reach new levels of adaptable Enterprise Architecture, performance, independence of rigid monolithic applications and true business driven agility.

1730-1800   Session 2 Q&A and Discussion

1800-1900   *Demonstration Area Reception*

Wednesday – October 18, 2006

0900-1115   **Session 3:** *Security in Large SOA Systems*
               Chair: Fred Waskiewicz, Director of Standards, Object Management Group

   It takes a well-designed combination of standards-based security hardware and software to protect an enterprise's IT systems. In this session, we'll learn how to secure these systems at the service level, and hear about the latest developments in WS-security.

0900-0945   **Using BPM to Help Secure your SOA**
               Philip Larson, Director of Product Management, Appian Corporation

Securing services is an increasing concern as organizations expose more business assets as reusable services in their SOA and consume more services from third parties. As the next generation of application development, BPM's native security framework will be a first line of defense for managing the secure orchestration of services in enterprise processes. BPM security must be coupled with other technologies (e.g. SSL, firewalls, WS-Security, etc.) to provide a complete solution to secure service orchestration.

0945-1030   **WS Security Update**
               Hal Lockhart, Principal Engineering Technologist, BEA Systems

The ability to provide message security with the same flexibility and generality as the SOAP processing model is vital to providing robust Web Services. WS-Security, which initially became an OASIS Standard in 2004, provides authentication, message integrity and confidentiality at the SOAP layer, using any of a variety of security infrastructure standards. Work on WS-Security and related standards, continues at OASIS and elsewhere. This talk will discuss the most recent developments in Web Services Security Standards. Subjects will include: a) OASIS WS-Security 1.1 - what's new, b) WS-I Basic Security Profile (including test tools and sample applications), c) WS-SecureConversation, WS-Trust and WS-SecurityPolicy, d) the WS-Security Frameworks Project.

1030-1045   Session 3 Q&A & Discussion

1030-1530   *Demonstration Area Open*

1045-1115   Morning Refreshments in Demonstration Area

1115-1400   Session 4: *Standards in BPM, MDA, and SOA*
Chair: Fred Waskiewicz, Director of Standards, Object Management Group

Standards for BPM, MDA, and software and systems modeling are written at OMG by the OMG members. In this session, we'll hear an insider report on BPMN and related standards, and an insightful presentation on how these fit together with each other, and with industry standards for the SOA infrastructure.

1115-1200   **Business Process Standards**
Jeanne Baker, Lead Program Manager, BizTalk, Microsoft

The fusion of Business Process Management with Service-Oriented Architecture to provide agile, business-driven applications is supported by a number of both ratified and newly emerging OMG standards. This talk introduces these standards, including the Business Process Modeling Notation (BPMN), the Semantics for Business Vocabulary and Rules (SBVR), Business Process Definition Metamodel (BPDM) and the Business Motivation Model (BMM). Learn where these standards fit, how they support BPM-focused SOA, and how you can help them progress through ratification and widespread adoption.

1200-1300   Lunch

1300-1345   **Are Current and Future Standards Effectively Addressing Segmentation within the BPM Space and Overlap between BPM, MDA and SOA?**
Karl Treier, CTO, Bluespring Software, Inc.

Is the analysts' functional segmentation within the BPM space across Integration, Human Worker, Decision and Document based solutions, coupled with opposing views regarding the role and degree of involvement that the business process owners should play in the implementation, leading to compromised or band aid addendum standards that attempt to address all aspects of BPM? Recognizing that BPM is much more an infrastructure technology than a siloed vertical application such as ERP or CRM, appropriate and careful consideration must taken to ensure that redundancy and overlap doesn't occur between standards that address BPM, Meta-Data and Service Oriented Architecture. A review current and proposed standards and how they address the segmentation within the BPM space and the overlap between BPM, MDA and SOA will highlight the importance of the work of OMG and its contributors.

1345-1400   Session 4 Q&A & Discussion

1400-1430   Afternoon Refreshments in Demonstration Area

1430-1615   Session 5: *Semantic Aspects and Ontologies*
Chair: Fred Waskiewicz, Director of Standards, Object Management Group

Syntactic interoperability is not enough – applications must agree on semantic aspects as well, if our web services are going to interoperate successfully from one enterprise to another. In this session, we'll examine recent progress in semantic interoperability standards.

1430-1515   **MDA & Semantic Web Services: Extending the Ontology Definition Metamodel (ODM) to Support Semantic Web Services (e.g., through OWL-S & SWSF)**
Elisa Kendall, CEO & Founder, Sandpiper Software

The Ontology Definition Metamodel (ODM) is an emerging standard from the Object Management Group that supports ontology development and conceptual modeling in several standard representation languages. It provides a coherent framework for visual ontology creation based on OMG's Meta Object Facility (MOF™) and UML™ (Unified Modeling Language) specifications, bridging Model Driven Architecture (MDA®)-based standards for automating the physical management and integration of metadata with Semantic Web technologies. The ODM is nearing finalization in the OMG, and has garnered tremendous support from the W3C, ISO, and OASIS communities in addition to many OMG members. In this talk Ms. Kendall will highlight key aspects of the UML profile for RDF and OWL, describe extensions to support development of Semantic Web services in a UML tool environment, and discuss example applications that extend traditional UDDI based registries to support service semantics for increased interoperability and service discovery.

1515-1600   **Semantic Web Progress and Directions**
              Deborah McGuinness, Co-Director and Senior Research Scientist
              Knowledge Systems Laboratory, Stanford University

The Semantic Web has seen progress on many fronts over the last two years. The Web Ontology Language (OWL) became a World Wide Web Consortium (W3C) Recommendation in 2004. Along with the recommendation status came increased activity and interest from many directions, from open source and commercial tool development to deployment in well-known production applications such as HP OpenView, Adobe Acrobat, RSS feeds, and Oracle databases. In the research and standards communities, focus has moved from language development to maintenance, and covers an increasingly broad range of applications, including semantic web services, rule-based systems, and social networking in addition to metadata management. In this talk, Dr. McGuinness will highlight recent progress made in semantic web infrastructure including standards progress supporting Semantic Web applications and services. Her talk will include an update on services languages and frameworks (e.g., OWL-S, SWSF, WSMO, WSML, …) as well as progress in development of a rules interchange format, which has direct impact on work at OMG in the Ontology Platform SIG, BMI Domain Task Force, and in the SOA Architecture Board SIG. Highlights from the Best Practices working group and its successor, the Semantic Web Deployment working group, will also be covered, with focus on progress and recommendations in semantic interoperability.

1600-1615   Session 4 Q&A & Discussion

1615-1745   **Panel: *Integrators' and Tool Implementers'***
              Moderator: Fred Waskiewicz, Director of Standards, Object Management Group

For this panel, we've gathered experienced integrators and tool designers/builders to discuss the rewards and problems that arise as you move from BPM, through MDA/UML, to development, deployment, and software evolution and maintenance of large, multi-enterprise WS/SOA systems. Following a brief introductory statement by each panelist, we'll open the floor to questions from the audience. This is your chance to ask what products can do, or how or why they do it, at a forum that always provides a lively and worthwhile discussion.

Panelists: Jim Amsden, *Senior Software Engineer*, IBM
               Jeanne Baker, *Lead Program Manager, BizTalk,* Microsoft
               Iyad Jabri, *President and CEO*, Intelliun Corporation
               Philip Larson, *Director of Product Management*, Appian Corporation
               Meir Levi, *CEO*, Interfacing Technologies

1800-2000   ***Workshop Reception***

Thursday – October 19, 2006

0900-1230   **Session 6: *Tool Chains: Working a Design from BPM, through MDA, to Implementation***
              Chair: Michael K. Guttman, Program Manager, The Voyant Group, LLC

As automation breaks through enterprise boundaries to integrate customers and suppliers into an ensemble application, development must break through the walls of the IT department to incorporate business processes and goals. MDA's Platform-Independent Model (PIM) started the move away from pure implementation and focused on what an application needed to accomplish, but today's BPM goes farther with its focus on business process. In this session, we'll hear how practitioners are using MDA to integrate their business models into the development tool chain.

0900-0945 **BPM Implementation with SOA and MDA**
Marc J. Balcer, VP, Product Management, AZORA Technologies

By now, we've all heard about the link between BPM and SOA. BPM provides a way to break down business processes into distinct activities and SOA provides a way to implement those activities as services. Unfortunately, many vendors and implementers are ignoring the lessons of EAI and connecting BPM activities directly to existing systems through service wrappers, creating a new, next-generation rat's nest of inflexibility. But there is a better way. To achieve the agility and flexibility that enterprise's need requires a hierarchy of service types organized into a sophisticated, layered SOA architecture. MDA to the rescue...Conveniently, MDA provides a mechanism to formalize the architecture and integrate it directly into the development process to simplify the design and implementation of individual services. Of course, SOA is not just about building single services, but also about the relationship between services at the enterprise level, and the relationship of those services to the enterprise information model (semantics). Here again, the clever use of MDA integrates this big-picture view directly into the development process to reduce or eliminate design deficiencies and to automatically enforce architectural constraints. This session will describe the SOA architecture and how to go from BPMN™ models to service implementation artifacts using MDA as an enabling technology.

0945-1030 **An SOA Solution Driven from Business Process Models using MDA: Methods and Lessons Learned**
Robert Lario, Principal, Inherit, LLC

Based on our recent project and sequent application, we will examine the process, techniques, and tools we used to effectively integrate and apply these technologies. We will discuss the obstacles encountered along the way in this project and the lessons learned to overcome them.

1030-1045 Morning Refreshments

1045-1130 **A Service-Oriented Approach Dedicated to Internet-based Business Process Networks: Building a MDA-based Collaborative Platform with Open-source Solutions**
Jean-Pierre Lorré, R&D Director, EBM WebSourcing

Today, enterprises networks are process driven in order to achieve business benefits, which includes strategic, financial and performance improvements, through increased reliability and agility in the definition and execution of business processes.
We will explain how our Service-Oriented approach makes easier and flexible the definition and management of the processes that will be supported by the collaborative platform.
We will describe an MDA framework based on BPM standards dedicated to our SOA based collaborative platform. The platform provides different kinds of collaborative business processes represented in BPMN notation that are translated, thanks to DSL, to deduce information system model in UML notation. It targets a SOA implemented thanks to an open-source stack from ObjectWeb SOA initiative.
The presentation will address main requirements for this architecture, in particular interoperability and flexibility and describe the overall process and tools.

1130-1215 **BPM Requirements and Standards in the Tool Chain**
Tim Stephenson, Engineer, TIBCO Software, Inc.

Delivering the promise of BPM more than ever reinforces the need to successfully bridge between business users and technologists. Typically this means multi-disciplinary teams, where each role requires their own view onto a common model yet uncluttered by aspects they do not care about or understand. Workflow and resource patterns can help to establish a lingua franca but some careful attention to usability is required to ensure each person can elaborate the model on its way from conception to implementation. This session will discuss the requirements and interplay of standards necessary to delivering such an ideal tool.

1215-1230 Session 6 Q&A & Discussion

1230-1330 Lunch

1330-1515   **Session 7: *Case Studies in BPM, MDA, and SOA***
                 Chair: Meir Levi, CEO, Interfacing Technologies

Implementation is where the rubber meets the road – All of the modeling, architecture, design, and development doesn't mean a thing if the application doesn't do what it has to, cleanly, efficiently, and securely. In this session, we'll hear from companies about their enterprise BPM/MDA/SOA systems – what they liked and what they didn't, and what they'd do the same way next time, and what they'll do differently.

1330-1415   **Business Service Oriented Architecture at the GSA**
                 Cory Casanave, CEO/President, Data Access Technologies

This talk will focus on business service oriented architecture, understanding the business as a set of interrelated services to provide for clear responsibilities, well defined processes, lines of communication and agility. The business-SOA is then enabled by a technical SOA at the systems level. This approach has been used by the U.S. General Services Administration as part of their enterprise architecture strategy, which will be used as a case study.

1415-1500   **SOA @ Credit Suisse - A Practice Report**
                 Hermann Schlamann, CTO Private Banking, Credit Suisse Information Technology

This practice report will present how Credit Swiss adopted the principle of "managed evolution" to launch service orientation on the Swiss Banking IT-Platform in Switzerland, and expand it globally. It shows the evolution since 1998, the lessons learned and the things we could have done better. The report will point out how important the link to the business is and what Credit Suisse currently does to achieve this link.

1500-1515   Afternoon Refreshments

1515-1630   **Panel: *Case Studies Lessons Learned***
                 Moderator: TBC

In this panel, end users who have modeled their business process with BPM and automated those processes using MDA with UML - or perhaps other methods - will discuss what they've learned: the good, and the bad. They'll discuss the methods they used, and the tools their crew swore by or at, as they moved from analysis, through design, to implementation, deployment, and maintenance. Following a brief introductory statement from each panelist, we'll open the session to questions from the audience.

Panelists: Cory Casanave, *CEO/President*, Data Access Technologies
                 Steve Hurban, *Business Process Analyst*, Boeing
                 Hermann Schlamann, *CTO Private Banking*, Credit Suisse Information Technology
                     Additional Panelists TBA