SOA IN HEALTHCARE CONFERENCE
VALUE IN A TIME OF CHANGE

June 2 - 4, 2009 - Chicago, IL USA

PROGRAM DETAILS

ANNUAL SPONSORS:

Platinum Sponsor:  |  Gold Sponsor:  |  Silver Sponsors:

EVENT SPONSORS:

Gold Sponsor:  |  Silver Sponsors:

Analyst Sponsor:  |  Media Sponsors:

Hosted by
<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Speaker(s)</th>
</tr>
</thead>
</table>
| 0830  | Conference Welcome                                      | Richard Mark Soley, PhD  
*Executive Director, SOA Consortium and Chairman & CEO, Object Management Group* |
| 0900  | Keynote: Who Defines the 'Service' in SOA               | The Honorable James B. Peake, M.D.  
*Lieutenant General, USA (Ret)*                                               |
| 1015  | An Evolutionary Approach to SOA in Healthcare Enterprises | Wes Rishel  
*Research Vice-President and Distinguished Analyst, Healthcare Provider Team of Gartner* |
| 1100  | Morning Refreshments                                     |                                                                            |
| 1130  | Driving Healthcare Vendors to a Services Paradigm       | Steve Wretling  
*Executive Director, Kaiser Permanente Enterprise Architecture, Application and Integration Architecture* |
|       |                                                         | The effective, consistent delivery of information is critical to enable continuity of healthcare and timely decision support. SOA is a critical component of the progressing healthcare electronic revolution. It is time to call for the convergence of SOA with vendor strategies as the foundation for healthcare interoperability. This session will focus on Kaiser Permanente's approach and key aspects of driving vendors to a Services model. |
| 1215  | The Role of SOA in Business-IT Alignment Cross-Enterprise Interoperability | Ken Rubin  
*Chief Architect, Federal Healthcare, EDS*                                     |
| 1330  | Federal NHIN Connect Overview                           | Craig Miller  
*Chief Architect, FHA CONNECT Initiative, Office of the National Coordinator for Health IT (US)*  
Tim Cromwell PhD, RN  
*Director, Standards & Interoperability CHIO, Dept. of Veterans Affairs*  
Steve Steffensen, MD  
*LCDR, MC USN, CMIO Telemedicine & Advanced Technology Research Center* |
Interconnected health information exchanges throughout the country will provide dramatic benefits for citizens and will help government agencies serve them better through enhanced care delivery, better insight into population health issues such as disease outbreaks, and decreased time required to process government disability benefits. Health IT interoperability will be a win for everyone.

The federal government is piloting a solution that will ultimately provide more than 20 federal agencies with a method to exchange health information among themselves and with the private sector. CONNECT, a solution built through federal collaboration in the Federal Health Architecture initiative, uses a service-based model that allows agencies to securely link their health IT systems to various health information exchanges in order to securely share health information with each other as well as with state, tribal and local government and private-sector healthcare organizations.

Speakers from the Federal Health Architecture, the Department of Defense and the Department of Veterans Affairs will share their perspective and experience related to the development of CONNECT to support nationwide health information exchange.

1430 - 1500

**The Business Side of SOA**

Fred Cummins  
Fellow, EDS

**TECHNICAL TRACK**

1330 - 1400

**SOA in an Electronic Health Record Product Line**

Sholom Cohen  
Senior Member Tech. Staff, Carnegie-Mellon Software Engineering Institute

Service-oriented architecture (SOA) and software product line (SPL) development approaches encourage the development and reuse of existing assets and capabilities rather than repeatedly redeveloping them for new systems. Organizations use these approaches to capitalize on systematic reuse achieving business goals and software benefits such as productivity gains, decreased development costs, improved time to market, higher reliability, and competitive advantage.

This talk presents an agile modeling exercise to develop Medical Information Management, a model product line of related systems to manage electronic or personal health records. The product line meets the need for a set of SOA-based systems that may be used across the healthcare industry for hospitals, clinics, skilled nursing facilities, medical offices, and patient home (self-directed). Common core assets such as an SOA and common services must be explicitly built for systematic reuse. The talk illustrates concepts that link SPL and SOA to build such services for reuse.

1400 - 1430

**The HL7 Services-Aware EA Framework (SAEAF): Introduction, Overview, and Governance**

Charlie Mead, M.D.  
Senior Associate, Booz-Allen Hamilton, National Cancer Institute

Work on the HL7 Services-Aware Enterprise Architecture Framework (SAEAF) began in June, 2008. This presentation will discuss the motivation and guiding principles of the SAEAF, including its "contextualization" within HL7 around the intersection of Model-
Driven Architecture (MDA), Computable Semantic Interoperability (CSI), the Reference Model for Open Distributed Processing (RM-ODP), and Services-Oriented Architecture (SOA). Included will be a discussion of the SAEAF Value Proposition of Working Interoperability (WI) and how that proposition lead the HL7 Architecture Board (ArB) to specify the SAEAF in terms of three core frameworks: the Behavioral Framework (BF), the Enterprise Conformance and Compliance Framework (ECCF), and the Governance Framework (GF). The BF and ECCF are discussed in detail in separate presentations. This presentation will present some of the structural and process details of the GF, both as it relates to any organization developing specifications (or standards) that are targeted for use in a larger WI context, and, in particular, as it relates to Standards Development Organizations (SDOs) such as HL7. The presentation will also include a discussion of specific examples of how the NCI CBIIT is adopting and implementing the HL7 SAEAF and the GF in its caBIG® and BIG Health™ enterprise interoperability projects.

1430 - 1500

**Integrating Patient Information with SOA**

Mike Rosen  
*Editorial Director, SOA Institute*

Accurate patient information is one of the thorniest problems facing health care providers. The combination of multiple physicians, offices, hospital, insurers, pharmacies, and privacy rules make it especially difficult to have an accurate, consolidated view of a patient. And, the consequences of inaccurate information can be drastic. Luckily, SOA can help. Of course, SOA is not a silver bullet, but when used with the appropriate architecture and design, it can address many of the challenges. This presentation provides a high-level view and example of an SOA solution for integrating patient information.

1500 - 1530

**Afternoon Refreshments**

SESSION 4 - 1530 - 1600

**BUSINESS TRACK**

1530 - 1600

**Myths vs. Reality: The Role of Open Source in Commercial, Production, and High Quality Healthcare Systems**

Skip McGaughey  
*Executive Director, Open Health Tools*

Ken Lunn, Ph.D.  
*Director of Data Standards and Products, Technology Office, NHS*

**TECHNICAL TRACK**

1530 - 1600

**Integrated Requirements Design: a Proven Methodology for Architecting Service-Oriented Solutions**

Wendell Ocasio, M.D.  
*Chief Medical Officer, Agilex Technologies*

For SOA, services are not the end-goal, they are an enabler. The goal is supporting the organization's business and functional goals. Often in large organizations, requirements analysis is done separately from architectural design, usually by different groups. This results in a disconnect whereby design specifications do not align with user expectations. A methodology called Integrated Requirements-Design (IRD) addresses these concerns. The
principles of IRD include early identification of the functional/business goals as overarching drivers, and elimination of the "wall" between requirements analysis and design. The presentation will detail real-world examples of the IRD process and the artifacts, with particular attention to the service-oriented aspects of the methodology. The key to IRD is an integrated team that involves functional stakeholders, subject matter experts, analysts, architects, system engineers, testers, and project managers. Enterprise and solution architecture act as glue that brings the separate concerns together into an integrated set of specifications.

SESSION 5 - 1600 - 1700
PANEL DISCUSSION:
The Perfect Storm - How Do Policy, Public Sector, Private Investment, and SOA Align?

Moderator:
Dipak Kalra, MD, PhD
Clinical Senior Lecturer in Health Informatics, University College London

Panelists:
Richard Mark Soley, PhD
Executive Director, SOA Consortium, Chairman & CEO, Object Management Group
Steve Flammini
Chief Technology Officer, Partners Health Care
The Honorable James B. Peake, M.D.
Lieutenant General, USA (Ret)

WEDNESDAY, June 3, 2009
0830 - 0845  Welcome - Opening Remarks
Charles (Chuck) Jaffe, MD, PhD
CEO Health Level Seven

0845 - 0930  Keynote: Making the SOA Business Case to Support Clinical Care and Public Health
Theresa Cullen, M.D., M.S., RADM
U.S. Public Health Service, Chief Information Officer, Indian Health Service (IHS)

SESSION 1 - 0930 - 1000
Collaboration That Worked: A Federal Architecture Solution to Achieve Health Information Exchange
Vish Sankaran
Federal Health Architecture (FHA) Lead, US Office of the National Coordinator for Health IT (US)

The Nationwide Health Information Network (NHIN) is designed to provide IT services for information sharing within federal agencies and with state, tribal, and local governments and the private sector. In 2008, federal agencies came together to create software to connect to the NHIN – the Federal CONNECT Gateway software solution. The Federal agencies have extended the CONNECT gateway using SOA to meet their specific needs and integrate with their existing systems. This address will examine why federal
agency collaboration to produce this solution was effective and relate this Federal work to
the NHIN and the opportunity for private and public sector participants on the NHIN using
a SOA platform. This infrastructure will support the secure exchange of interoperable
health information based on a set of common web services implemented by all health
information exchanges within the NHIN.

1000 - 1030

The Business Case for SOA and the Critical Role of Architecture in the
Interoperability Challenge

Lynn Vogel, Ph.D.
VP and CIO, MD Anderson Cancer Center, University of Texas

1030 - 1100

Demonstration Area Opens

Morning Refreshments in Demonstration Area

SESSION 2 - 1100 - 1200

BUSINESS TRACK

1100 - 1130

Lessons-Learned on Implementing a SOA at VA

Brandt Welker
Director, Solutions Analysis and Architecture, Dept. of Veterans Affairs

1130 - 1200

Continua Health Alliance: Personal Telehealth

Rich Rogers
Healthcare IT Standards, IBM
Randy Carroll
Wintergreen Technologies

A key challenge today is to provide quality care with limited resources for populations
with increasing percentages of elderly and chronic disease. This requires new models for
care, collaboration, and channels for access and care settings. The Continua Health
Alliance mission is to establish an eco-system of interoperable personal health systems that
empower people and organizations to better manage their health and wellness. Continua
Health Alliance Continua was founded in 2006 and now has over 190 member companies
and organizations. Rich and Randy will provide a brief overview of the Continua
organization and their scope. At a high level they will describe the Continua architecture
with an emphasis on the importance of standards and SOA to the ecosystem. They will
share experiences from recent demonstrations of a Continua reference implementation at
HIMSS ’09 and IHE Europe.

TECHNICAL TRACK I - (SOA PLANNING & ADOPTION TRACK)

1100 - 1130

The Importance of SOA in a Large Cancer Center IT Environment

Charles Martinez
Manager Clinical and Research Integration Development, University of Texas MD
Anderson Cancer Center

Describe how one SOA solution harmonizes real-time clinical and research data streams
improving clinical research and reporting compliance. The MD Anderson Cancer Center
MDACC devotes its resources to cancer treatment and research. The blending of these activities, clinical cancer research, brings science to the bedside for patient benefit. Informatics support for this activity requires real-time integration of clinical and research data. This data must be available to federally-mandated scientific and ethical oversight, compliance staff and treating physicians/research staff. Mandatory characteristics of data require representation as standardized elements, availability through many institutional systems, and storage in unique locations ("single source of truth"). Interoperability demands and data consistency have driven the selection of SOA for MDACC. One example of serviced data is the specialized pathology lab service (SPIDR). MDACC’s Stem Cell Transplant Application (BMTweb) consumes the SPIDR data for internal research use and services out standardized data to national registries.

**1130 - 1200**

**SOA for Healthcare - The Promise and Pitfalls**

Dennis Smith  
*Lead, System-of-System Practice Initiative, Carnegie-Mellon University*

Grace Lewis  
*Lead, System-of-System Engineering, Software-Intensive Systems Initiative*

An important, though elusive, national priority is the development of an integrated Health Information Technology (HIT) network with the goal of enhancing patient care by improving access to information and reducing medical errors, while reducing costs. However, the widespread adoption of HIT systems has historically been an elusive goal because of expanding regulatory mandates, engineering challenges, and difficulty in reaching consensus on shared data.

One potential approach toward achieving these goals is through the use of Service-Oriented Architecture (SOA) which is a way of designing systems that are composed of a set of reusable capabilities or services that are invoked in a standard way. This session outlines how SOA can be applied to HIT, the very real potential benefits, as well as the significant challenges that need to be addressed to have a significant impact.

**TECHNICAL TRACK II - (SOA TUTORIAL TRACK)**

**1100 - 1200**

**SOA Enablement and Adoption Strategy for the Healthcare Enterprise (Workshop), Part I**

Robert Lario  
*CEO, VisumPoint*

SOA Enablement and Adoption Strategy for the Healthcare Enterprise is a two-part discussion aimed at Senior Managers in a Healthcare organization. This workshop will provide a high level introduction to SOA, successful roll-out strategies for implementing SOA solutions, and insight into future strategic developments that will affect the approach. The first half will focus on assessing a healthcare enterprise’s ability to adopt SOA. It will provide adoption strategies and best practices for SOA adoption. The second half of the discussion will provide Senior Managers with a working knowledge of the role of SOA in the healthcare enterprise. It will cover key fundamental aspects of SOA as it relates to a manager as well as concepts managers need to understand to make informed decisions.

Upon completion of these sessions, Executive Managers will have a better understanding of SOA and its role within their enterprise.

**1200 - 1300**

**LUNCH**
1300 - 1330  Excellence in Practice: Real-World Award Winning Implementation of SOA in Government

Kevin Moore  
Director/CIO, US Military Entrance Processing Command (MEPCOM)

Using USMEPCOM's recent award winning implementation of SOA to modernize its Enterprise Architecture, this session will provide USMEPCOM's roadmap toward achieving a high measurable Return On Investment from SOA while overcoming challenges and avoiding pitfalls that could derail your project. Specifically, this session will address critical issues and lessons learned associated with the implementation of cutting edge technology and business process management in support of an overarching transformation.

1330 - 1400  Three Dimensions of Service Orientation in Healthcare: Organization, Business, IT

Bogdan Motoc  
Senior IT Specialist, Alberta Health Services

This presentation intends to assist the audience in evaluating the multi-dimensional complexity of Service Orientation (SO), with a Healthcare perspective. It argues that, in order to successfully mitigate the risks related to a SO Architecture (SOA) implementation, all dimensions need coherent governance.

Healthcare is facing aggressive market changes: changing demographics, exploding costs, shrinking revenues to name a few. A viable business adjustment strategy has to be built on efficiency and agility through differentiation and integration.

The first part of the presentation discusses the multi-dimensionality of a Service Orientation implementation within a systemic view of the Organization as a living social construct. The second part of the presentation looks briefly at a business services decomposition example of a generic ambulatory process.

1400 - 1430  Practical Experience in Deploying a SOA Base Product for Hospital Patient Quality of Care Improvement

Craig Cunningham  
COO, OntoReason LLC

This presentation will discuss OntoReason's experience with deploying a quality of care application within hospital environments, utilizing SOA technology and standard information models in support of reducing patient hospital acquired illnesses.

OntoReason will address their experiences and findings using SOA technologies while deploying our quality of care deep vein thrombosis prevention module in hospital environments. The solution presented will highlight the issues with deploying services including: security, configuration of protocols, access to patient data, visualization services, and reasoning tools for identification of patients at risk. A dashboard solution designed to enhance the experience for unit nurses to assist in the execution of protocol standards will be demonstrated.

OntoReason will discuss the implementation of this system within environments utilizing SOA technology supporting both thin and thick client access to information. OntoReason will present our practical experience with enterprise level solutions providing solutions to real world problems.
Integrating Communities of Practices for Collective Healthcare Intelligence

Othel Rolle  
*Senior Manager, Pfizer, Inc.*

This presentation will survey current quality methods for the integration of knowledge from various Communities of Practice to support collective Healthcare intelligence. The purpose of this presentation is to present the state of collective intelligence in the pharmaceutical industry. Quality is central in supporting collective intelligence goals but speed and accessibility of tools are equally critical. In this case study, I will present a journey of trial and error in applying Collective Intelligence technology to the integration of Pharmaceutical R&D. A variety of semantic technologies were tested for this case study.

TECHNICAL TRACK I - (SOA PLANNING & ADOPTION TRACK - Cont.)

1300 - 1400  
**PANEL DISCUSSION:**  
Which SOA services are needed to accelerate healthcare integration?

*Moderator:*

Ronald Schmelzer  
*Managing Partner, ZapThink*

*Panelists:*

Josh Painter  
*Senior Architect, Intel*

Dave Shaver  
*CEO, CorePoint Health*

Brandt Welker  
*Director, Solution Analysis and Architecture, Veterans Affairs*

TECHNICAL TRACK I - (SEMANTIC & TECHNOLOGY TRACK)

1400 - 1500  
SOA and Terminology Asset Management

Russ Hamm  
*Informatics Consultant, Apelon Inc.*

Standardized terminology is playing an increasingly important role in the development and deployment of interoperable EHRs. In this presentation, we will show that service-oriented architecture offers a conceptual framework that enterprises can use not only to develop and integrate software (in support of Terminology Services), but also to understand and manage terminology assets. We define terminology services as the software and content infrastructure necessary to deploy standardized terminologies within an enterprise. Because of the fragmented nature of terminology development, as well as a large number of semi-proprietary file formats and tooling platforms, service-oriented architecture offers an excellent paradigm for successful terminology services implementation. However, even with a successful terminology services infrastructure, many enterprises still are frustrated in their attempts to deploy standard terminology. We define terminology asset management (TAM) as the essential set of people and business processes that an enterprise must deploy to support its Terminology Services investment.
1300 - 1400  SOA Enablement and Adoption Strategy for the Healthcare Enterprise (Workshop), Part II

Robert Lario  
CEO, VisumPoint

1400 - 1430  HL7 System Design Reference Model (EHR-SD RM) Built on Healthcare SOA Reference Architecture

Steve Hufnagel, Ph.D.  
Architect/System Engineer, DOD Military Health System
Nancy J. Orvis, M.H.A., CPHIMS  
Dir of National Health Standards Participation and IM/IT Integration  
DoD(HA)/TMA/IMT&R/SPEAR

1430 - 1500  Using Information Modeling and Model Driven Architecture to Create SOA Interoperability Standards

Galen Mulrooney  
Principal, JP Systems, Inc.  
A common set of Information Models is a critical pre-requisite to SOA implementation. Yet SOA’s strength - the reuse and re-purposing of existing implementations - stretches the capability of traditional modeling methods and tools. This session explores the use of Model Driven Architecture to produce various implementable artifacts from a single set of models, thus increasing the utility and value of Information Models. Real life experiences at the Veterans Health Administration and several Standards Development Organizations will be highlighted.

1500 - 1530  Afternoon Refreshments in Demonstration Area

1530 - 1600  Unlocking Clinical Information Assets: a Service-oriented Approach to Integration

Josh Painter  
Senior Architect, Intel
1600 - 1700  **PANEL DISCUSSION:**

How Do Organizations Realize Business Value from Enterprise Architecture and SOA Investments?

**Moderator:**
Sorina Vlaicu, Ph.D., MD, MPH
*George Mason University*

**Panelists:**
John Dodd  
*EA Principal and Practice Leader, CSC*

Samuel Waissman  
*Director Enterprise Architecture, Presbyterian Healthcare Services*

Andy Bond  
*Director of Interoperability*  
*National e-Health Transition Authority (Australia)*

---

**TECHNICAL TRACK I - (SEMANTIC & TECHNOLOGY TRACK - Cont.)**

1530 - 1600  **The Challenges of Designing Terminology Services in an Application Oriented Enterprise**

Michael Riben, MD
*Assistant Professor, Cytopathology,  
Director of Anatomic Pathology Informatics*  
*Department of Pathology*

*Medical Director, Vocabulary/Ontology Services,*  
*Department of Data Management and Application Services*

Faced with the goal of implementing semantic interoperability between our clinical, administrative and research applications that not only meet business and academic mandates internally, but allow for data sharing with increasingly important federally mandated requirements coming from organizations such as the NCI, FDA, and NIH, we have sought to implement core terminology services to support this ambitious undertaking, that could be utilized across all application domains. We are approaching this directive by carefully addressing the dependencies between data standards, data modeling, and terminology/ontology requirements and an implementation strategy based on a services oriented architecture and semantic web technologies. We will highlight the challenges and solutions we have encountered in the requirements phase and design phase of a services based terminology/ontology infrastructure.

1600 - 1630  **Federated Software Architecture for the Federated Utah Research & Translational Health e-Repository**

Oren Livne  
*Senior Software Engineer, University of Utah*

FURThER is the data and knowledge infrastructure of the Center for Clinical and Translational Science at the University of Utah. FURThER’s main objective is to deliver innovative software services that support data and knowledge access, integration and discovery. It includes a federated comprehensive repository of genotypic, phenotypic, genealogic, clinical, environmental, and public health resources, and a web portal interface to patients, providers and researchers. The ultimate goal is to integrate the major Utah healthcare delivery networks: University of Utah Healthcare System, Intermountain
Healthcare, VA Salt Lake City and Utah Department of Health. Regulatory-compliant data security, model translation, federated querying and performance requirements pose software engineering challenges.

Oren will present a "federated architecture" to address FURTHeR's complex requirements. The system consists of a core and a set of modules, written in Java and XML. The core addresses cross-cutting concerns and orchestrates module execution: maven2 is used to automatically drive the entire software life cycle: building, regression testing, and deploying web applications on servers. Spring is used to inject dependencies among modules, allowing each to focus on its own task. Web services are developed via Apache CXF. Each module addresses one FURTHeR aspect, e.g. terminology services, metadata services and model translations. Modules interact through interfaces that enable isolated testing and semantic interoperability at the service level.

As the design federates loosely-coupled reusable modules, industry-standard open-source frameworks and portable platforms, it permits future integrations with SOA healthcare systems such as caBIG, GUARDS, and HL7 SAEAF. A live demo will demonstrate a term.

1630 - 1700
Survey on Demand System (SODS): An Adaptive and Integrative Architecture for Structured Health Data

Parsa Mirhaji, MD
Assistant Professor of Medicine; Univ. of Texas Health Science Center, Houston

SODS adopts an SOA architecture for a dynamically adaptive, distributed information collection system that enables semantic information integration across disparate data collected in real-time by different groups of people, different projects in different geographical locations. SODS architecture triangulates 3 modern systems design concepts:
a) goal-directed, user-centric task analysis to identify system competencies; b) Formal ontologies to model information, and processes to enable competencies; c) SOA Services that implement competencies explicated by ontologies. SODS uses formal ontologies to decompose informatics problems of a distributed and dynamic data collection and integration platform into layers of models that can be meaningfully interact with each other and with the Services that implement them in an asynchronous and distributed web environment.

SODS receives input data in form of SOAP/XML messages from various data collection devices (web based online forms, and occasionally connected PDA or PC clients) and translates and integrates information into an OWL/RDF based triple-store that uses a unique resource identification scheme to account for the longitudinal and temporal relationships between information.

A set of ontologies enables consistent use of vocabularies and concepts, and semantic integration of information across all data collection activities. Series of asynchronous services convert the resulting RDF graph into various representations for data mining and analysis on demand (RDBMS, OLAP, SAS, SPSS, EXCEL output).

SODS is being used for just-in-time collection and integration of individual and population data in a disaster preparedness and biosurveillance setting, as well as a multicenter clinical trial with participants across the nation.
The HL7 Service-Aware EA Framework (SAEAF): Behavioral Framework

John Koisch  
*National Cancer Institute*

Alan Honey  
*Chief Architect, Insurance Institute for Safety in Medicine (II4SM)*

The Behavioral Framework (BF) component of the HL7 SAEAF is not specific to use by HL7. Rather, it provides a conceptual framework for specifying the functional, behavioral, and associated static semantics involved in the interactions between two trading partners during an interaction by explicitly defining the core components necessary to completely describe a given interaction. The BF is organized around the formal notion of Contracts and Roles, constructs which are intellectually inspired by Martin Fowler's Accountability Pattern and that take their rigor from RM-ODP. The presentation will discuss the six core BF constructs as well as the relationship of the Contract metaphor to these constructs. The presentation will also include a discussion of specific examples of how the NCI CBIIT is adopting and implementing the SAEAF Behavioral Framework in its caBIG® and BIG Health™ enterprise interoperability projects, as well as how the ii4SM is utilizing the Behavioral Framework.

Putting Standards Into Practice: Lessons Learned While Introducing SOA Into IHE

John Moehrke  
*Principal Engineer, GE Healthcare*

This session will discuss the lessons learned when SOA was introduced to the Integrating the Healthcare Enterprise (IHE). A new IHE white paper discussing SOA is intended to communicate the benefits of IHE in an SOA world to those who understand the SOA design approach. The writing of this white paper uncovered far more synergy than discord. The talk will discuss these lessons learned during educating the group on SOA concepts, which resulted in a mapping of concepts and process used in the white paper, and a better understanding of the difference between network-services, Web-Services, and SOA. There will then be informative discussion of some sample SOA services that leverage IHE profiles for their implementation.

Consolidation of European AAL SOA Platform

Stale Walderhaug  
*Researcher, SINTEF ICT (Norway)*

1700 - 1900  
Workshop Reception in Demonstration Area
THURSDAY, June 4, 2009

0830 - 0845  Welcome - Opening Remarks

Skip McGaughey
Executive Director, Open Health Tools

0845 - 0915  Keynote: Architecting Data Standards to Enable Service Interoperability

Ken Lunn, Ph.D.
Director of Data Standards and Products, Technology Office, NHS

SESSION 1 - 0915 - 1000

0915 - 1000  Singapore's National E-Health Records - an Enterprise Architecture Approach

Peter Tan
Executive Consultant, Ministry of Health Holdings, Government of Singapore
Leong Seng Ong
Executive Consultant (IT Architecture & Standards), MOH Holdings, Singapore

Singapore's Minister of Health has declared a S$200 million (~USD129m) budget towards deploying a National EHR by 2010. Given the diversity of public, private and charity sector healthcare providers, an Enterprise Architecture approach was adopted to inform implementation planning.

The National EHR Architecture (NEHRA) was developed over 4 months with a core team of clinicians and IT architects, with an extended team of clinical task forces and IT project managers. 35 clinical and non-clinical stakeholders were consulted in the process. NEHRA currently informs the multi-year implementation plan for the EHR. This presentation seeks to share the pragmatic approach and lessons learnt from this short but exciting 4-month journey.

1000 - 1030  Morning Refreshments

SESSION 2 - 1030 - 1200

BUSINESS TRACK

1030 - 1100  Healthcare SOA: From Requirements to Deployment; An Example

Demetrios Yannakopoulos
Chief Analyst, Perot Systems

It is argued that SOA is too theoretical to recommend concrete designs or practical solutions. IT practitioners increasingly request practical guidelines with which to deliver SOA solutions. While much is published on how SOA can assist businesses to become agile and efficient, there are few papers on how a bridge linking business goals to IT design can be easily realized.

Drawing from experience from the entertainment industry and the Department of Veterans Affairs, this paper demonstrates how Healthcare business requirements are transformed into SOA design, detailing how SOA analysis, definitions, and best practices produce actionable design and deployment artifacts. The service-oriented modeling presented here, enables practitioners to address a Healthcare organization's issues such as "for a set of business goals, what services should be built?" and "what are the modeling steps that produce service modules?"
The health care industry in the United States faces key uncertainty conditions. The health plan market is faced with increased health care spending and shifting demographics, increased regulatory changes around the uninsured and underinsured population, changing demand in the existing customer base (the insured), increasing compliance needs and a changing competitive landscape.

A technology-enabled health care delivery model is an imperative as health plans address two key challenges: maintaining growth and innovating the business model amid the changing landscape.

A solution to enable an agile response to these challenges is needed to support the delivery model of the future. Services Thinking™ is our approach to enable a flexible response to these market-driven challenges. We suggest a top-down, business objectives-driven approach to building capabilities that sustain. Rather than invest in monolithic applications and dramatic changes in technology strategy, we suggest incremental investments and reconfiguration of current assets to derive agile capabilities.

Compliance with regulatory and governance standards (esp. HIPAA) is rapidly becoming one of the hot topics of healthcare IT today. This is because, especially with regulatory compliance, both business and government have to expect legal, financial and reputational losses if compliance cannot be ensured and demonstrated. One major difficulty of implementing such regulations is caused by the fact that they are expressed at a high business-oriented level of abstraction, and not SOA IT centric. An automated, reliable technology approach is required to map these down to IT enforcement and monitoring/reporting for SOA. Model Driven Security (MDS) is an innovative technology approach that can help solve these problems by automating the mapping from requirements to SOA application security. In this presentation we will illustrate how Model Driven Security helps implement HIPAA compliance, using a case scenario that applies ObjectSecurity's acclaimed OpenPMFT application security automation product to SOA (and Cloud/SaaS/Web2.0).
Meeting Privacy Needs of the Nation Today” is a multi-vendor, advanced SOA technology demonstration of interoperable healthcare security and privacy services. The session describes how privacy consents and access control standards accepted by the U.S. Department of Health and Human Services can be used to make sensitive information secure and private when implemented in a standards-based SOA environment. This session will describe the advanced SOA technology behind multi-vendor demonstrations sponsored by the Organization for Advancement of Structured Information Standards (OASIS), in cooperation with the U.S. Healthcare Information Technology Standards Panel (HITSP), presented at the RSA Conference 2008, and the HIMSS (Healthcare Information and Management Systems Society) 2009 conference Interoperability Showcase. Key standards such as the Security Assertion Markup Language (SAML) and eXtensible Access Control Markup Language (XACML), are included in relation to emerging role-based access control, privacy consents and Cross-Enterprise Security and Privacy Authorization (XSPA) standards and profiles.

**TECHNICAL TRACK II - (SOA INFRASTRUCTURE TRACK)**

**1030 - 1100** Immunization Reporting and Clinical Decision Support Via a Service Oriented Architecture

*Michael J Suralik*  
*Senior Project Manager, HLN Consulting*

**1100 - 1130** Service Oriented Architectures in European HealthGrid Projects

*Richard McClatchey*  
*Professor, University of the West of England*

During the past few years there have been several generations of projects that address the delivery of service-oriented architectures in European Grid-based healthcare projects. These projects have developed from early implementations directed at specific researchers or specific diseases (e.g. mammography) to later data-integration projects and recently to third generation information infrastructures. This talk will present the evolution of SOAs through examples of these projects with particular emphasis on the MammoGrid, Health-e-Child and neuGRID research outputs. It will also outline the role of the European HealthGrid Association in encouraging and promoting the delivery of SOAs for healthcare. The role of user participation in these projects will be highlighted as an essential element in their success; case studies of best practice from projects will be cited and recommendations drawn for future research directions.
The 'Big SHINNY Bus' - An SOA Infrastructure for New York Healthcare

Vincent Lewis
Principal Architect, GSI Health

1200 - 1300  LUNCH

SESSION 3 - 1300 - 1400

PANEL DISCUSSION:

Fostering Health IT transformation and SOA's Role: A Government and International Perspective

Moderator:
Sorina Vlaicu, Ph.D., MD, MPH
George Mason University

Panelists:
Dennis Giokas, PhD
CTO, Canada Health Infoway
Ken Lunn, PhD
Director, Standards and Products, National Health Service (UK)
Peter Tan
Executive Consultant, Ministry of Health Holdings Singapore

SESSION 4 - 1400 - 1500

1400 - 1430  Locknote: Reflections on the Conference: Thoughts on Making Your SOA Initiative Successful

Dennis Giokas, PhD
CTO, Canada Health Infoway

As the Chief Technology Officer for Canada Health Infoway, Dennis Giokas is charged with fueling the national transformation of the Canadian e-Health system into an open, interoperable environment that is being based upon a service-oriented architecture. In this session, Mr. Giokas will surface themes that have arisen during the Conference and blend them with his experiences in Canada to offer insights of relevance to organizations undertaking their own SOA initiatives.

1430 - 1500  Conference Wrap-Up

1500 - 1530  Afternoon Refreshments