OMG Modernization Summit
Wednesday, March 21, 2018
Reston, VA

8:45am – 8:55am   Opening Remarks - OMG Modernization Roadmap

Richard Soley, PhD, Chairman OMG

Opening Remarks - OMG Modernization Roadmap : How Architecture Driven Modernization Supports Model Driven Architecture

8:55am – 9:45am   The Role of Business Architecture in Business-driven, IT Transformation

William Ulrich, President, TSG, Inc. & Co-Chair, ADM Task Force

Large scale, technology-driven IT architecture transformation efforts can be hard to justify, harder to sustain, and result in major investments that are misaligned with business strategy. These shortcomings are largely due to the inability to align business and IT architectures and result in billions of dollars in wasted IT investments annually. This session outlines a comprehensive, business-driven, and end-to-end transformation approach that organizations can leverage regardless of size or industry sector. This collaborative transformation approach provides key stakeholders with a consistent understanding of business strategy and related impacts across business units, IT assets, and related practices and disciplines. Finally, this session discusses how to get started and position business / IT architecture investments.

9:45am – 10:45am   Modernizing Mission Critical Legacy Systems for Secure Cloud Computing

Philip Newcomb, Founder, Chairman and CEO the Software Revolution, Inc & Co-Chair ADM Task Force

The ADM approach to legacy system modernization provides the best practices and standards for modernizing legacy systems for cloud computing. By combining bottom-up reverse-engineering to models and top-down model-driven and rule-driven information system to cloud micro-services architectures, coupled with automated refactoring to remediate technical debt and improve software quality, ADM has emerged as the most rigorous and disciplined approach for software modernization. Mr Newcomb draws upon a wealth of research and practical experience to address the challenges and opportunities organizations confront in migrating mission-critical legacy applications to the Cloud.

10:45am – 11:00am   Refreshment Break

11:00am – 12:00pm   SPMS: Modernization by Lifting Your Abstractions – or - How to Build Your *Own* Flying Car

Jason McColm Smith, PhD, ADMTF Chair Emeritus

Any system or solution to a problem has an inherent set of concepts and abstractions that form the backbone. Whether the domain is software design, systems architecture, business processes, or enterprise optimization, the core issue remains the same: how do you identify, express, and improve that backbone? The Structured Patterns Metamodel Standard (SPMS) is a domain-independent system for helping you achieve these goals, no matter your specific industry or need. SPMS provides a common format for defining, organizing, and referring to the concepts that you use every day, and a methodology for building highly complex systems out of simple ideas. As an OMG specification, SPMS creates a ready-made data sharing standard for tooling to collectively use, for repositories of data to use for unified access, and for practitioners to implement. As part of the family of OMG specifications, SPMS already works with the standards you know and love, such as UML, OCL, BPML, KDM, and AST, to name a few, and is the foundation for a new class of specifications centered around software quality. SPMS also defines the Pattern Instance Notation (PIN), a graphical display language for quickly working with abstractions within your existing graphical notations, in informal and formal

ways. In this talk, you will be introduced to SPMS, and find out how it can be used in conjunction with your existing techniques to help you understand and modernize your systems and designs.

12:00pm – 1:30pm   Plenary lunch

1:30pm – 2:30pm   Winning the Cyber War with Structured Software Assurance
Robert Martin, Senior Principal Engineer, MITRE

What things can go wrong and how can we win the cyber security war?   Weakness are mistake or flaw condition in ICT architecture, design, code, or process that, if left unaddressed, could under the proper conditions contribute to a cyber-enabled capability being vulnerable to exploitation. Vulnerability are mistake in software that can be directly used by a hacker to gain access to a system or network. Exposure are configuration issue of a mistake in logic that allows unauthorized access or exploitation.   Exploits are weakness (or multiple weaknesses) to achieve a negative technical impact. Attack approaches from the set of known exploits are used in the Common Attack Pattern Enumeration and Classification. This talk discusses Security issues relating to Reliability, Performance, and Maintainability. Prioritizing Security Issues in Software, Security Scoring systems, Metrics & Measures, Patterns and Communicating what you have done to assure issues are addressed using Assurance Cases and Certification Processes.

2:30pm – 3:30pm   Putting an End to Technical Debt
Dr. Bill Curtis, SVP & Chief Scientist CAST, Executive Director, CISQ

OMG has just approved a standard developed by the Consortium for IT Software Quality (CISQ) for automating the measurement of Technical Debt. It is based on CISQ's four previously approved structural quality standards for the automated measurement of Reliability, Security, Performance Efficiency, and Maintainability. This talk will explain the full technical debt metaphor and how its various components can be measured. It will also present a process model for managing and controlling technical debt to reduce business risk and corrective maintenance costs.

3:30pm – 3:45pm   Refreshment Break

3:45pm – 4:45pm   Knowledge Discovery for Cyber Assurance
Nick Mansourov, PhD, CTO, KDM Analytics

Cybersecurity is trust in a system's ability to execute trusted behavior and to prevent malicious attacks with the objective of protecting information, assets, and services against compromise. Dr. Mansourov will explain how to identify, analyze, classify and understand cybersecurity threats and related risks in software. He will discuss cyber risk standards and the interrelationships between assurance, engineering and risk used to assess the truthworthiness of a system.

4:45pm – 5:00pm   Wrap Up and Next Steps

6:00pm – 8:00pm   Networking Cocktail Reception