THE MONITOR

CMMI Version 1.3: An Update

Clarification of the high maturity material for Version 1.3 of the Capability Maturity Model Integration (CMMI) framework, which is planned for release in November, will be addressed within the existing collection of process areas in lieu of the addition of a new process area.

CMMI Project Manager Mike Phillips, in an interview in early May, said that the CMMI team had considered clarifying high maturity issues through the addition of a new process area called Organizational Performance Management. However, after further investigation and feedback from high maturity lead appraisers and attendees at the SEPG North America 2010 conference, the CMMI team decided to address the high maturity clarifications within the existing number of process areas. Because the Organizational Performance Management purpose includes improvement, the choice was made to combine it within the existing Organizational Innovation and Deployment goals. This assures that users do understand that there is change, but without the addition of an additional process area.

"We think this way will make it less onerous for the people trying to understand the change," explained Phillips. "It might be appropriate for future updates to the model, but right now this is the better answer."

In addition, the CMMI team will be reviewing the surveys from individuals and organizations who piloted and reviewed draft versions of materials.

"That is the final step. We will review the material and make one final update before the November publication," Phillips said.

In May, the CMMI team received the results from organizations that piloted Version 1.3 with a special emphasis on the high maturity material.

"In these cases, they had already ongoing activities like an appraisal that would allow them to compare "Hey, if we had used this one, what might it have told us,'" Phillips said. In other cases, the reviewers simply commented on preferences from a variety of perspectives. The CMMI team is now reviewing those results to determine if there are any additional updates that need to be made to the model. If so, they will be incorporated into the final draft.

One thing that hasn't changed with respect to CMMI Version 1.3 is that it will address the latest approaches to modern engineering development along with Agile-method use within the CMMI framework, Phillips added.
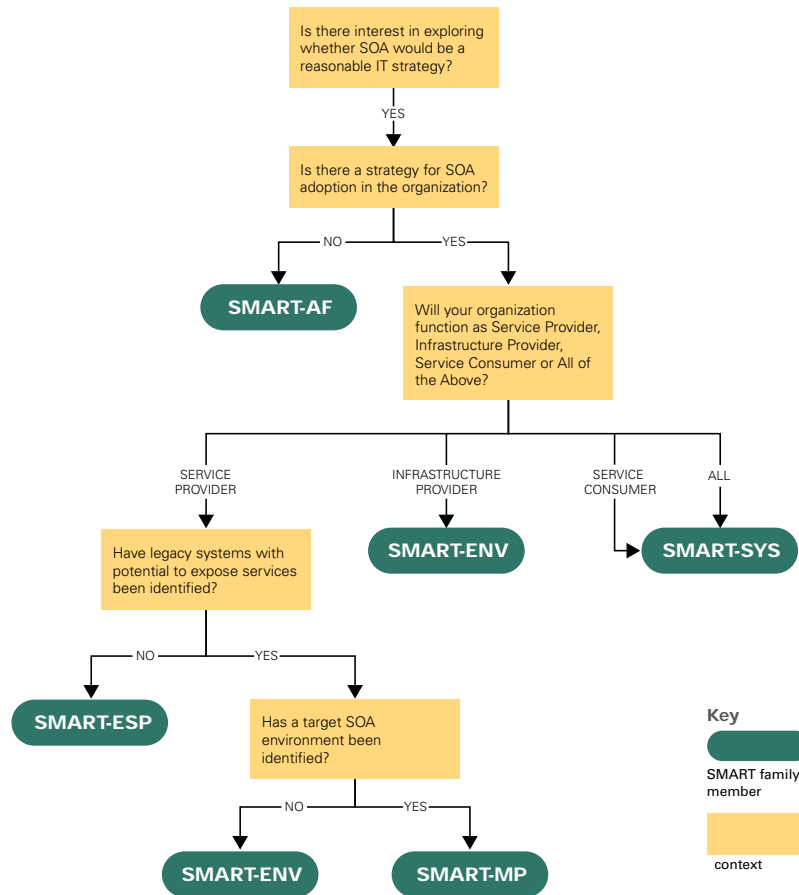
On the cover, SEI Members from left to right: Ashley A. Desmond of Tinker Air Force Base, Danielle C. Rogacki of the Office of the Commissioner of Insurance, Danieth Patton, and Ronald Lear of cLear Improvement & Associates. Thanks to Anna Mosesso for contributing photography.

A New Name for SMART: SOA Migration, Adoption, and Reuse Technique

Is there interest in exploring whether SOA would be a reasonable IT strategy?

YES

Is there a strategy for SOA adoption in the organization?

NO → **SMART-AF**

YES → Will your organization function as Service Provider, Infrastructure Provider, Service Consumer or All of the Above?

SERVICE PROVIDER → Have legacy systems with potential to expose services been identified?

INFRASTRUCTURE PROVIDER → **SMART-ENV**

SERVICE CONSUMER → **SMART-SYS**

ALL → **SMART-SYS**

NO → **SMART-ESP**

YES → Has a target SOA environment been identified?

NO → **SMART-ENV**

YES → **SMART-MP**

Key

SMART family member

context

When Grace Lewis, technical lead for the SEI's system-of-systems engineering research, originally devised the Service Migration and Reuse Technique, she focused on helping organizations reuse code from legacy software systems and expose it as services that are available to users throughout an organization.

But as Lewis and her team began working with organizations, they realized that there were many organizations that either weren't yet ready to migrate code or needed a greater understanding of what it means to move to a service-oriented architecture (SOA) environment.

"We started to understand that there were other opportunities where our approach can help that don't involve migration," Lewis explained. This became the impetus for a decision to change the method's name to the SOA Migration, Adoption, and Reuse Technique (SMART). "The new name more accurately reflects the scope of the work that we are doing with organizations. Migration is still a main interest, but there are other entry points into the SOA world."

SMART is really a family of approaches, organized to accommodate different starting points for SOA adoption that match particular organizational needs. Lewis said the name change will apply to all the SMART family members, which include

- **SMART-MP (Migration Pilot**): The original SMART method, used for organizations interested in migrating legacy systems to SOA environments.

- **SMART-AF (Adoption Feasibility):** Targets organizations that need help determining if SOA is the right fit.

- **SMART-ENV (Environment):** Focuses on helping organizations understand a specific target SOA environment and identify associated costs and risks before migration.

- **SMART-ESP (Enterprise Service Portfolio):** Targets organizations with numerous legacy systems that want to strategically identify what parts of these systems to expose as services.

- **SMART-SYS (Systems):** Focuses on organizations that are targeting the development of full service-oriented systems: services, infrastructure, and service consumers.

"This adjustment is just another example of the SEI looking at the real needs of customers and evolving to meet those needs," Lewis explained.

In the coming weeks, the new name for SMART—SOA Migration, Adoption, and Reuse Technique—will be applied to SEI online and print materials that describe or discuss the technique. For information on SMART, visit www.sei.cmu.edu/library/abstracts/brochures/smartfamily.cfm for a copy of our information sheet.

Survey Results

We asked. You responded. Thank you to the 213 SEI Members who responded to the 2010 SEI Membership survey. As promised, we selected three names of those SEI Members who took the survey. Those Members will receive one free book from the SEI Series in Software Engineering. They are Brad Ayres of the U.S. Air Force Institute of Technology, Larry Fellows of Boeing Integrated Defense Systems, and Brian Magers of IS Technologies.

Some highlights from the survey results:

- 78% of members indicated that they would refer an individual or colleague to SEI Membership.

- A whopping 96% of SEI Members indicated that the program was either a "good value" or "pays for itself."

- 70% of respondents rated Members-only publications like the weekly *Bulletin* and monthly *Monitor* as the benefit most valuable to them. This was the number one answer. Second highest was course and conference discounts.

Welcome SEI New Members!

Members seem to like what we're doing. In the last few months alone, we've added many new SEI Members from various industries. Please join us in welcoming them to SEI Membership and keep the referrals coming!

Basem Alkazemi of Umm Al Qura University

Alfredo Alza of the U.S. Army

Gregory Barry of Westinghouse

Jefferson Blatt of Fatec

Maria Cardieri

Catherine Chamberlin of Telephonics Corp.

Chayan Dasgupta of Overland Solutions

Philip Garfinkel of Telephonics Corp.

Simik Sarkis-Kelly of McKesson

Francesca Mirabile of SSC Pacific

Keith Raboteau of Raboteau

Brenda Russell of the U.S. Army

William Wood of the U.S. Army

William Youngman of PJM Interconnection LLC

Greg Zdenek of Jacobs Engineering Group

See the article on the back cover for information on how you can win an autographed copy of Watts Humphrey's new book for referring someone to SEI Membership!

Noteworthy Technical Reports

The following SEI technical reports were recently published and can be downloaded for free:

Characterizing Technical Software Performance Within System of Systems Acquisitions: A Step-Wise Methodology
www.sei.cmu.edu/library/abstracts/reports/10tr007.cfm
Bryce L. Meyer & James T. Wessel
CMU/SEI-2010-TR-007

Managing Variation in Services in a Software Product Line Context
www.sei.cmu.edu/library/abstracts/reports/10tn007.cfm
Sholom Cohen & Robert Krut
CMU/SEI-2010-TN-007

Identifying Anomalous Port-Specific Network Behavior
www.sei.cmu.edu/library/abstracts/reports/10tr010.cfm
Rhiannon Weaver
CMU/SEI-2010-TR-010

Evaluating and Mitigating Software Supply Chain Security Risks
www.sei.cmu.edu/library/abstracts/reports/10tn016.cfm
Robert J. Ellison, John B. Goodenough, Charles B. Weinstock, & Carol Woody
CMU/SEI-2010-TN-016

Educational Opportunities at the SEI

Upcoming Offerings from the SEI Webinar Series

The SEI Webinar Series marks our latest effort to bring you—the global community of software and systems engineers and security specialists—the latest research, best practices, and cutting-edge solutions developed at the SEI. The SEI Webinar series is free and open to the public. View any webinar in the series on-demand at www.sei.cmu.edu/library/webinars.cfm.

SEI Webinar Series: Securing Global Software Supply Chains

by Christopher Alberts, a senior member of the technical staff at the SEI, and Bob Ellison, a senior member of the technical staff at CERT
Thursday, June 10, 2010, at 1:00 p.m.

About the Webinar

The increasingly global nature of software development has raised concerns that global supply chains could be compromised, allowing malicious code to be inserted into a delivered software product during development, or enabling a compromised product to be substituted during delivery or installation. However, the intentional exploitation of software vulnerabilities inadvertently introduced during development continues to be the most attractive means of an attack. Each step in a supply chain can be a source of such vulnerabilities, and increased assurance for the final product requires the consistent application throughout the supply chain of development techniques demonstrated to reduce the likelihood of vulnerabilities.

Commercial firms and state and federal government agencies that acquire software have shifted responsibility for software assurance to the software contractors, integration contractors, and software product vendors that participate in the corresponding supply chain. In these instances, software assurance cannot be improved until effective techniques for reducing vulnerabilities are incorporated into the software supply chain.

This webinar will discuss an ongoing SEI effort to develop an approach for assessing software supply chains and identifying the associated software assurance risks.

SEI Webinar Series: Critical Lessons Learned in the Content and Delivery of Six Sigma Training

by Dave Zubrow, manager of the SEI's Software Engineering Measurement and Analysis (SEMA) initiative and Robert W. Stoddard, a senior member of the technical staff at the SEI
Wednesday, June 30, 2010, at 1:30 p.m.

About the Webinar

A wide variety of sources of Six Sigma training abound making it difficult for organizational leaders to identify which training and Six Sigma implementations are best for their work situations. Additional confusion arises due to different philosophies on how to best train practitioners and domain experts in applied Six Sigma methods. This webinar will summarize critical lessons learned in both the content and delivery of Six Sigma training that have been identified by SEI researchers from their experiences with several large corporations. The lessons learned will be shared in the context of advanced solutions and approaches built into the SEI Six Sigma-related courses. These lessons learned can make the difference between a successful adoption and usage of Six Sigma for tactical process improvement versus a failed investment in Six Sigma training that is neither usable nor practical in today's fast-paced business environments.

CMMI Version 1.3: An Update

"These best practices, as captured and illuminated by new and informative materials, are part of the value of CMMI Version 1.3," Phillips said. Through clarification and consolidation of practices, the CMMI team has been able to reduce the size of the model for two of the three constellations. The CMMI for Development constellation alone has been reduced by 100 pages, Phillips said.

The CMMI team is also making changes for all related courses to reflect the Version 1.3 content. Phillips said these changes may include changing the name of the three-day Introduction to CMMI course to Introduction to CMMI for Development.

Final clarifications to reflect the Version 1.3 content are also being made to the Class A Method Definition Document, which describes the requirements, activities, and practices associated with each of the processes that compose the Standard CMMI® Appraisal Method for Process Improvement (SCAMPI℠) method.

"We will be providing that draft to our review teams for a final check," Phillips said.

Member Profile

Dr. Gary Lunsford
Member Since 2004

As a senior principal analyst at ARINC Engineering Services (AES) in Charleston, South Carolina, Dr. Gary H. Lunsford serves on a five-person team that provides process improvement services for government and commercial clients.

"We started as a consulting group within ARINC," Lunsford explained, adding that their role has expanded in recent years and now includes supporting clients with implementing the Capability Maturity Model Integration (CMMI) SCAMPI appraisals and classroom instruction along with Lean Six Sigma (LSS) services. "Today, we are the center of excellence for process improvement, and CMMI in particular, for ARINC Engineering Services, an SEI Partner."

A primary client for AES and Lunsford's team is the U.S. Navy Space and Naval Warfare Systems Command (SPAWAR) that operates out of Charleston and other southeastern cities. Lunsford provides direct process consulting support to the chief engineer of SPAWAR's Systems Center-Atlantic. Among his many duties is participating in SPAWAR's monthly Enterprise Process Group meetings where, in February, he presented the latest information on CMMI for Services.

"I thought membership would enhance my access to publications and would be an opportunity to get to know the staff at the SEI better."

"I'm providing officially sanctioned SEI classes and SCAMPI appraisals," explained Lunsford, who works with other military bases and commercial clients in implementing the three CMMI constellations—Acquisition, Development, and Services. In addition to instructing the introductory course for CMMI for development and acquisition and services supplements, Lunsford is also certified by the SEI as a SCAMPI A Lead Appraiser and authorized as a SCAMPI B and C Team Leader for the CMMI for Acquisition, Development, and Services models.

Lunsford became an SEI Member in 2004.

"I wanted to identify with the SEI in as many ways as possible," explained Lunsford who, at the time, was taking classes associated with the SEI's Lead Appraiser track. "I thought membership would enhance my access to publications and would be an opportunity to get to know the staff at the SEI better."

On a separate front, Lunsford served as vice-chairman of the Charleston-wide Joint Industry Advisory Board, which is co-sponsored by The Citadel and the College of Charleston. He is also vice-president of the Low Country South Carolina Phi Beta Kappa Association. In addition, he serves as Coordinator for the South Carolina Software and Systems Process Improvement Network (SPIN), which he co-founded.

Prior to his arrival at AES, Lunsford worked for 14 years at Georgia Tech Research Institute (GTRI) where he directed a number of projects, including a multi-million dollar air defense system project for a software engineering program.

While at GTRI, Lunsford analyzed, designed, and implemented computer simulations of physical systems that included writing trajectory generation programs for NASA and ballistic missile defense applications. He also developed data filtering algorithms for re-entry vehicle data discrimination and pattern recognition.

Lunsford received his bachelor's degree in physics from Duke University, his masters' degree in physics from the University of Illinois, and a doctorate in physics from the Georgia Institute of Technology. His doctoral thesis tied in with the early activities in simulating and studying chaos activity using computers.

Before going to Georgia Tech, he worked with IBM Federal Systems division, where he developed and taught a 40-hour course in celestial mechanics that was used in the national ballistic missile defense program to plan the country's defensive strategy in the event of a ballistic missile attack. He was also involved in the Apollo and Space Shuttle programs.

"You might say I was a rocket scientist," explained Lunsford.

As his career progressed, Lunsford said his growing awareness that technical personnel and management teams often did not speak the same language sparked an interest in process improvement.

"I saw it as an opportunity to facilitate a more effective and cooperative interchange between management and technical people," he explained. "As I do SCAMPI appraisals and teach CMMI classes, I am able to help management and technical personnel to work together more closely and to see organizations improve their processes. I find that very gratifying."

Outside of work, Lunsford has maintained his long-term interest in tennis and running. He still enjoys playing the piano.

SEI Members: Win a Free, Autographed Copy of Watts Humphrey's New Book
Reflections on Management

Do you know a coworker or colleague who could benefit from more networking opportunities and a close, personal relationship with the SEI?

The first five people to refer a colleague or coworker to SEI Membership will receive a free, autographed copy of Humphrey's new book, *Reflections on Management*, which was published in April by Addison Wesley as part of the SEI Series in Software Engineering.

All you have to do is tell a friend, colleague, or coworker about all the ways you benefit from being an SEI Member.

When they join, ask them to indicate on their Membership Application (or to an SEI Member Representative) that you referred them. That's it.

Please direct your SEI Member recruits to our website— www.sei.cmu.edu/membership/join—and have them download an application, fill it out, and fax it to 412-268-6257.

Or have them call SEI Member Services at 800-201-4479 or email membership@sei.cmu.edu.