



Technical Working Group Meeting 24-25 February 2004

AGENDA

Tuesday, 24 February 2004

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| 8:00am - 8:30am | Sign-In, Coffee |
| 8:30am - 9:00am | <i>“The Current Status of PSM”, Cheryl Jones, US Army TACOM-ARDEC</i>
Cheryl will update attendees on recent PSM activities, upcoming events, and the status of PSM products. In addition, opportunities for participation will be identified. |
| 9:00am - 9:40am | <i>“Earned Value Prediction - Are We Really on Budget and on Time?”, Nathan Shirley, Accenture, Quality and Process Improvement</i>
This presentation follows the path of building a higher maturity measurement program that strives to add value to project managers while meeting the requirements of CMMI(r) Level 4 Quantitatively Managed. It will demonstrate how to use earned value calculations to determine if the project will actually deliver on time and on budget. |
| 9:40am - 10:20am | <i>“IFPUG”, Betsy Clark, Software Metrics, Inc.</i>
Betsy will discuss a new professional certification for software measurement that is being developed by the International Function Point Users Group (IFPUG). The certification will reflect an individual’s knowledge and experience in software measurement and is not based on function point knowledge. |
| 10:20am - 10:50am | AM Break |
| 10:50am - 11:30am | <i>“ISO 25000 Series on Software Product Quality Measurement”, Dave Zubrow, Software Engineering Institute</i>
Dave will discuss the status of the ISO work on measuring software product quality. This series of standards covers quality requirements and evaluation and uses measurement as the link between the two. Progress has been made to ensure consistency between ISO 25000 and 15939. It is critical, however, for the measurement community to continue to monitor and contribute to the development of these standards. |
| 11:30am - 12:10pm | <i>“Measurement - Is it A Matter of Maturity?”, Virginia Slavin, Software Productivity Consortium</i>
Most training material addresses a specific target audience, which can sometimes be a little misleading for those that have to transition this training to other organizations. This presentation will delve into some issues and concepts to keep in mind when working with measurement across different maturity organizations. In particular, we will compare and contrast Level 4-5 measurement concepts with Level 1-2 |

measurement concepts. Material is pulled from experiences in working with both levels of organizations by the author. Attendees should be able to better adjust their measurement expectations based on the maturity level of the organization they are working with.

12:15pm - 1:15pm

Lunch on your own (cafeteria downstairs)

1:15pm - 1:55pm

“Measure Like a Fighter Pilot”, Joe Lindley, Raytheon

This briefing covers the use of the OODA Loop (Observe, Orient, Decide, Act) as an implementation strategy for the Measurement & Analysis (MA) process. Colonel John R. Boyd, both an accomplished USAF fighter pilot and military thinker, developed the OODA Loop as a winning strategy for air combat. It is simple, elegant, and applicable to many fields of endeavor.

1:55pm - 2:30pm

PM Break

2:30pm - 3:10pm

“Measurement of Safety Processes”, Paul Caseley, University of York, John Murdoch, University of York

The PSM Technical Working Group on Safety & Security worked through 2003 on safety measurement, publishing a White Paper on the PSM website in February 2004. This presentation summarises the approach taken, the recommendations in the White Paper and the current status of safety measurement guidance materials. The presentation also reports on two recent safety measurement case studies. The future development of PSM safety measures and the related issue of security measurement are discussed, closing with an invitation to participate in development work and industrial trials.

3:10pm - 3:50pm

“Identification and Control of Possible Stinkers”, Antonio Moya, ERICSSON ESPAÑA, SA

Antonio will discuss the extreme importance of detection of potential stinkers (risky product) software units at the early stage of a project. He will discuss the testing phases used to prevent software units from become stinkers.

3:50pm - 4:30pm

“Workshop Descriptions”

Each workshop lead will briefly describe the goals of their workshop.

4:30pm -5:00pm

Closing Comments, Cheryl Jones

Wednesday, 25 February 2004

8:00am - 8:30 am Sign-in, Coffee

8:30am - 12:00pm **Concurrent Workshops** (see details in the back of document):

#1 - "PSM RUP Plug - In Review"

Workshop Lead: Doug Ishagaki, IBM Rational Software

#2 - "Measurement of Safety and Security Processes"

Workshop Leads: Paul Caseley, John Murdock, University of York

#3 - "Systems Engineering"

Workshop Leads: Chris Miller, Software Productivity Consortium

12:00pm - 1:00pm Lunch on your own (cafeteria downstairs)

1:00pm - 5:00pm **Concurrent Workshops** (see details in the back of document):

#1 - "PSM RUP Plug - In Review"

Workshop Lead: Doug Ishagaki, IBM Rational Software
(continuation of morning session)

#4 - "Systems of Systems Measurement"

Workshop Lead: Dave Zubrow, Software Engineering Institute

#5 - "Acquisition Measurement"

Workshop Leads: Paul Janusz, US Army TACOM-ARDEC

(AM and PM Breaks As Appropriate)

5:00pm ***Adjourn***

Workshop #1: PSM RUP Plug-In Review
Facilitator: Doug Ishigaki, IBM Rational Software

First Session

Date: 25 February 2004

Time: 8:30am - 12:00noon

Second Session (continuation)

Date: 25 February 2004

Time: 1:00pm - 5:00pm

Prerequisites

Knowledge and use of RUP is useful

Materials to Bring

Questions about RUP measurement plug-in

Discussion:

A new IBM Rational Unified Process®, or RUP® plug-in has been jointly developed by PSM and IBM, released in January 2004, and available for [download](#) at the PSM Web site. This plug-in integrates the measurement activities, artifacts, and concepts as described by PSM, replacing the measurement concepts provided by the RUP base framework.

In this workshop, we will review the current version (release 1.0) of the plug-in and identify areas for improvement.

Goals/Products

- Review and discuss PSM Plug-In content (roles, activities, concepts, guidelines)
- Identify recommended enhancements for future releases of the plug-in
- Review the PSM Plug-In's candidate measures
- Identify field sites for validating the PSM Plug-In

Workshop #2: Measurement of Safety and Security Processes
Facilitators: Paul Caseley, John Murdoch, University of York

Date: 25 February 2004
Time: 8:30am - 12:00noon

Prerequisites

Those with experience or interest in the measurement of information security processes are warmly invited. Delegates with experience of applying measurement to novel, or new, system processes would provide useful insights. Awareness of the current draft of the PSM TWG *Safety & Security White Paper* and of the FAA-iCMM / CMMI study on safety & security would be useful, though not essential.

Materials to Bring

Knowledge and/or experience of information security processes and their measurement (deployed and potential) on any project or service. Proposals or ideas for security-related information needs, measures and/or indicators, if possible.

Discussion

The group will plan the development of process improvement measures for security processes. The following steps are proposed, as a rough framework for the discussion:

1. identify and clarify information needs related to security process performance;
2. develop draft measurable concepts to inform the identified information needs;
3. review typical working practices in the security domain, with the objective of identifying measurable artifacts and their attributes;
4. develop draft measurement constructs, mapping the measurable concepts onto artifacts etc.

The group will peer review draft identified measures (available at the meeting) and consider integration into the PSM framework and writing up in the *Safety & Security White Paper*.

Some points that may get discussed are:

- harmonisation with CMMI/ iCMM work on safety & security;
- the treatment of risk/ uncertainty in the PSM framework;
- whether the approach to safety measurement is an appropriate model for security;
- how to validate proposed measures (where not currently deployed); trial project identification etc.

Goals/Products

The goals of this workshop are:

- to identify generic information needs, draft measurable concepts and potential measures for security processes;
- to summarise findings in a draft note;
- to plan the updating of the *Safety & Security White Paper* to include security measurement and subsequent trials, development etc.

Workshop #3: Systems Engineering

Facilitator: Chris Miller, Software Productivity Consortium

Date: 25 February 2004

Time: 8:30am - 12:00noon

Prerequisites

Knowledge of Systems Engineering

Materials to Bring

Sample SE measures and indicators

Discussion

Attendees will select a few key product measures to define with the PSM Measurement Specification template. By leveraging the joint PSM-INCOSE MWG Technical Measurement white paper, the workshop will begin by categorizing and selecting a manageable subset of common product measures. The remainder of the workshop will involve refining these measures into measurement constructs using the PSM measurement specification template.

Goals/Products

The goals of this workshop are:

- Create measurement constructs using the PSM measurement specification template.

Workshop #4: System-of-Systems Measurement
Facilitator(s): Dave Zubrow, Software Engineering Institute

Date: 25 February 2004
Time: 1:00pm - 5:00pm

Prerequisites

Workshop attendees should have a general understanding of systems acquisition, systems engineering, and systems architectures, particularly with respect to interoperability, and integration issues. Understanding of parametric cost analysis, statistical analysis methods, and development of cost estimating relationships is desirable.

Materials to Bring

Knowledge and/or information of system-of-systems integration efforts, sources of data, experiences and insights.

Discussion:

The facilitators will discuss ongoing DAU-sponsored research dealing with identifying the sources and drivers of cost, schedule, and acquisition risk in system-of-systems acquisitions. The premise of the research is that acquisition of a system-of-systems changes the nature of the effort from primarily one of development to one of systems integration. The researchers hypothesize that systems integration is substantially different from systems development and may require new measurement approaches to obtain the necessary insight to predict and manage acquisition outcomes. The focus of this workshop is to identify candidate measures relevant to the prediction of system-of-systems acquisition outcomes.

Goals/Products

- Identify generic information needs for system-of-systems acquisition
- Identify and document potential measures for system-of-systems I-C-M tables

Workshop #5: Acquisition Measurement
Facilitator(s): Paul Janusz, US Army TACOM-ARDEC

Date: 25 February 2004
Time: 1:00pm - 5:00pm

Prerequisites

Workshop attendees should have a general understanding of systems acquisition, and program office requirements for supporting system acquisitions. Understanding of parametric cost analysis, statistical analysis methods, and development of cost estimating relationships is desirable.

Materials to Bring

Knowledge and/or information of program office functions, sources of data, experiences and insights.

Discussion:

The facilitators will discuss ongoing Air Force developments of a Program Office Acquisition Support Cost model. They will focus on identifying the specific drivers that affect the required effort to provide adequate support during a software intensive system development. This workshop is to identify candidate measures relevant to the prediction of required resources to staff a program office.

Goals/Products

The goals of this workshop are:

- Validate current information requirements in the Air Force Model
- Identify and document potential measures for Acquisition Support for the I-C-M tables