



**5th Annual PSM USERS' GROUP CONFERENCE**  
**"Expanding the Application of PSM"**

**CONFERENCE AGENDA**

**Monday, 23 July 2001**

7:00am - 9:00am                   **Continental Breakfast**

7:30am - 8:30am                   **On-Site Conference Registration**

8:00am - 11:30am               **Training:**

***PSM One-Day Tutorial*** - This 1 day tutorial provides an overview of the guidance included in Practical Software and Systems Measurement: A Foundation for Objective Project Management, Version 4.0b. The course is intended as an introduction to PSM for those with little or no prior PSM experience.

10:00am -10:30am               **AM Break**

11:30am - 1:00pm               **Lunch on your own**

1:00pm - 5:00pm               **Training:**

***PSM One-Day Tutorial (continuation of morning session)***

***The Qualified Trainers Session has been cancelled.***

*Conference sponsored by the PSM Support Center and the  
International Council on Systems Engineering (INCOSE)  
in cooperation with ASQ Software Division*



2:30pm - 2:45pm

**PM Break**

4:00pm - 6:00pm

**On-Site Conference Registration**

*Dinner and evening activities on your own*

## **Tuesday, 24 July 2001**

7:30am - 8:30am

**Continental Breakfast  
On-Site Conference Registration**

8:30am - 9:00am

Conference Welcome, Cheryl Jones, PSM Project Manager  
Introductions, Conference Overview, Project Update

9:00am - 9:45am

***Keynote Presentation: "Defense Science Board Recommendations", Mike Dyer, Lockheed Martin***

In September of 1999, the Defense Science Board (DSB) Task Force on Defense Software was formed and tasked to: review the findings and recommendations of previous Department of Defense (DoD) studies, assess the current environment to identify changes since previous studies, assess the current state of software development programs – both DoD and commercial, and identify focused recommendations to improve performance on DOD software intensive programs. The Task Force stressed that although there are many challenging technical issues, the major factor in successful software development is disciplined execution. Therefore, the Task Force recommended a back-to-the-basics approach. Mike will present the recommendations in his presentation.

9:45am - 10:25am

***"Applying Practical Software Measurement (PSM) in a Small CMM Level 3 Organization", Mary Ann McGarry, IITRI***

This presentation describes the successful institutionalization of a measurement program, in a small organization, through the application of the PSM principles and approach. This presentation will begin with a brief profile of the IITRI Spectrum Engineering Groups (SEGs) and an overview of state-of-affairs (from a software process improvement and measurement perspective) at the time the PSM measurement approach was adopted. The presentation will describe the IITRI SEGs software measurement program, including the underlying measurement philosophy and processes upon which it is built. It will conclude with a discussion of the expansion of the measurement program, and how PSM and Insight are used to meet the requirements of the CMMI.

10:25am

**AM Break**

10:55am - 11:35am

***“Measurement in CMMI”, Kevin Richins, US Air Force STSC and Joe Jarzombek, PMP***

This presentation will focus on the status of measurement in the CMMI effort. It will bring attendees up to speed on the M&A PA as well as other measurement related material (Quantitative Project Management, Organizational Process Performance, etc). It will discuss how compliance with the CMMI measurement content can aid an organization in becoming compliant with various international standards, PSM, etc.

11:35am - 12:15pm

***“Measuring Systems Engineering in the Systems Integration Work Environment”, Rene Schreiber, Lockheed Martin***

This presentation provides an approach to measuring systems engineering. The approach follows Practical Software and Systems Measurement (PSM) and was developed in conjunction with process improvement based on the System Engineering Capability Maturity Model (SE-CMM) requirements. The approach successfully supported achievement of Level 4 and 5 ratings in SE-CMM assessments. This presentation will discuss an overview of the process, analysis considerations and interpretations, usage by management at all levels, implementation challenges and lessons learned.

12:15pm - 1:15pm

**Lunch Provided**

1:15pm - 1:55pm

***“IEEE Standard 1540, Software Engineering Risk Management Measurement-Based Life Cycle Risk Management”, Paul R. Croll, Computer Sciences Corp.***

This presentation will describe IEEE 1540's PSM-based process model and its single set of process requirements for the measurement and management of a broad variety of risks in the acquisition, supply, development, operation, and maintenance of software products and services for software intensive systems.

1:55pm - 2:15pm

***“Models of Data”, Brad Clark, Software Metrics, Inc.***

This presentation describes different types of models that can be constructed from your PSM data. The model producer (one who creates a model from data) will get an overview of the steps involved in constructing small-scale models. The model consumer (one who uses the outputs of a model) will get an overview of how models are built and how to be an intelligent consumer of modeling results.

2:15pm - 2:55pm

***“OSD Software Management Metrics”, Ruth T. Buys, CMS Information Services and Ron Torezan, OASD/C3/DCIO***

This presentation will describe the motivations underlying this initiative, describe the process used to develop the core set of measures, review the core measures, and address lessons learned.

Conference topic areas addressed:

- Implementing issue-driven measurement at different levels of an organization
- Measuring the performance of an organization or enterprise
- Issue-driven measurement for diverse management disciplines and objectives
- Implementing the PSM process - lessons learned from specific applications

2:55pm

**PM Break**

3:30pm - 4:10pm

***“Observations: Performance Improvement from Process Improvement”, Jim Sturges, Lockheed Martin***

This presentation will demonstrate one operating unit's method of measuring the tangibles of investment and return on that investment, and will augment those measurements with samples from other high-maturity operating units. Included will be the results from a year-long study of 143 strategically significant programs relating earned value to capability maturity.

4:10pm - 4:50pm

***“Measuring Return on Investment for Process Improvement”, Bob MacIver, Software Productivity Consortium***

This presentation describes the essential elements for justifying process improvement and discuss the key relationships among PI initiatives and how they can be measured. A standard model will be presented that can be used to determine associated costs and financial benefits.

4:50pm - 5:20pm

***“Distributive Software's Three-Phase Implementation Plan”, Tom Majewski, Distributive Software, Inc.***

This presentation will discuss Distributive Software's experience in implementing a measurement process methodology in organizations of varying size (small, medium, large) and process maturity (none, low, high). Valuable lessons learned in three years of trial, error and success will be discussed. Lessons learned include the single "master" all-encompassing implementation plan presenting difficulty to both the supplier and acquirers.

***Dinner and evening activities on your own***

## Wednesday, 25 July 2001

7:30am - 8:30am

### **Continental Breakfast**

8:30am - 9:10am

### ***“Implementing Measurement and Risk Management in the CMMI”, Paul Janusz and Mia Hernandez, US Army TACOM-ARDEC***

The US Army TACOM-ARDEC is a pilot site for CMMI. This presentation will describe the implementation of the Measurement and Analysis and Risk Management process areas. The process utilized will be described, along with lessons learned.

9:20am - 10:00am

### ***“Challenges of Measurement When Using a Continuous CMM for Higher Levels”, Garry Roedler, Lockheed Martin***

Using a continuous representation capability model for higher levels of capability or maturity poses several challenges. This presentation will focus on the measurement challenges observed during previous work of the authors and confirmed by recent observations in an assessment of the M&DS Systems Integration organization that yielded 12 Level 5 ratings and one level 4 rating.

9:00am - 9:30am

### ***“Insight”, Dave Morris, Independent Engineering. Inc.***

This presentation will include a brief background and introduction of Insight. Dave will explain and demonstrate each of these new capabilities and their benefits.

10:00am

### **AM Break**

10:30am - 11:15am

### ***“CMM Based Insight”, Guy Mercurio, Defense Contract Management Agency***

Defense Contract Management Agency (DCMA) is currently pilot testing a new process for performing Software Contract Management Services on Supplier Software Development activities. This pilot initiative is a 4-phased implementation approach, which started in FY00 and is expected to be fully implement by FY03. This presentation will discuss the goals of CMM Based Insight. CMM Based Insight is a continuous evaluation based upon SEI's SW-CMM implemented in conjunction with normal software CMS activities. CMM Based Insight data not only will provide customers with supplier process capability, but also an evaluation of impact to their programs.

- 11:15am - 12:00noon ***“PSM Moves to the Financial District”, Betsy Bailey, Software Metrics, Inc.***  
Betsy will describe the use of PSM within the context of a software process improvement (SPI) initiative being conducted by TeraQuest for a large financial institution. This work was done in collaboration with Beth Layman. Areas that will be addressed include measures for project management in the context of the SW-CMM, measures for tracking SPI progress, and measuring the impact of SPI, with a focus on calculating hard dollar savings.
- 12:00 noon - 12:15pm **Group picture (location TBA - wear your shirt)!**
- 12:15pm - 1:15pm **Lunch on your own**
- 1:15pm - 4:45pm **Concurrent Workshops:**
- #1 - Measurement Field Trials - Object-Oriented Measurement***  
Workshop Lead: Khaled El Emam, National Research Council, Canada
- #2 - Measuring Systems Engineering Products***  
Workshop Lead: Ken Stranc, MITRE, and Garry Roedler, Lockheed Martin
- #3- Insight***  
Workshop Lead: Dave Morris, Independent Engineering, Inc.
- 2:30 **PM Break**
- 5:00pm - 9:00pm *Conference Dinner and Rodeo***

## Thursday, 26 July 2001

7:30am - 8:30am

**Continental Breakfast**

8:30am - 12:00pm

**Concurrent Workshops:**

***#4 - Organizational Measurement***

Workshop Lead: Bob MacIver, Software Productivity Consortium

***#5 - PSM Additional Implementation Guidance***

Workshop Lead: Tom Majewski, Distributive Software

***#6 - Systems Engineering Cost Estimation***

Workshop Lead: Dr. Barry Boehm, USC

***#7 - PA&E Metrics Proposal,***

Workshop Lead: Tom Coonce, PA&E

10:00am - 10:15am

**AM Break**

12:00pm - 1:00pm

**Lunch Provided**

1:00pm - 4:30pm

**Concurrent Workshops:**

***#8 - Project Justification Measures (Organizational Measurement)***

Workshop Lead: Bob MacIver, Software Productivity Consortium

***#9 - Effective Implementation of a Measurement Program***

Workshop Lead: Kevin Richins, US Air Force STSC and Joe Jarzombek, PMP

***#10 - Work Breakdown Structures Development***

Workshop Lead: Joe Dean, Tecolote Research, Inc.

***#11 - Models of Data***

Workshop Lead: Brad Clark, Software Metrics, Inc.

3:00pm

**PM Break**

Evening

***Workshop Leads Session***

Workshop Leads will summarize the results of each workshop and prepare materials for posting on the web.

***Dinner and evening activities on your own***

## **Friday, 27 July 2001**

7:30am - 8:30am

**Continental Breakfast**

8:30am - 9:00am

***Conference Wrap-Up Session***

8:30am - 11:30pm

***Workshop Leads Outbriefs (15 minutes each)***

Workshop Leads will summarize the results of each workshop.

10:00am - 10:15am

**AM Break**