

Practical Software and Systems Measurement

Practical Software and Systems Measurement

A foundation for objective project management



***Systems Engineering
Products & Processes
PSM Users Group Conference***

***Department of Defense
U.S. Army***



Practical Software and Systems Measurement **Systems Engineering Products & Processes**

- *Does SE measurement of products and processes require guidance beyond that already provided by PSM?*
- *If so, how do we characterize the additional guidance that is needed?*

Practical Software and Systems Measurement

Objectives of the Workshop

- ***Develop guidelines***
 - ***Determine if additional guidance is needed***
 - ***Identify practical ways to use PSM to define and apply MOEs, TPMs, MOPs, MOSs, and other measures specific to SE products and processes***
- ***Outline a SE case study***
 - ***Produce an outline showcasing examples of SE product measures and indicators such as MOEs, TPMs, MOPs, MOSs, and other product measures***

Practical Software and Systems Measurement

Workshop Format

- **Agenda**
 - **Introduction of topic, agenda, and participants (30 min)**
 - **Presentation/group discussion**
 - **Definition of terms (15 min)**
 - **Presentation/group discussion**
 - **Review of examples (30-45 min)**
 - **Participant presentations**
 - **Determine whether additional guidance is needed**
 - **Group decision**
 - **Identify areas where guidance is needed (90 min)**
 - **Apply PSM process to SE measures**
 - **Facilitated discussion/brainstorming**
 - **Outline a case study (45 min)**
 - **Brainstorming**

Practical Software and Systems Measurement

Workshop Background

- ***Where we've been***
 - ***1997 PSM Users Group Conference***
 - ***Decision to consider incorporation of SE measurement***
 - ***1998 INCOSE International Workshop***
 - ***Measurement Working Group (MWG) decision to support PSM, proposed integrated approach for guidance document***
 - ***1998 PSM Users Group Conference***
 - ***Decision to incorporate SE measurement in PSM***
 - ***1999 INCOSE International Workshop***
 - ***Agreement that SE measurement can generally follow existing PSM process***
 - ***Significant differences were visible in some measures***
 - ***1998 through 1999 PSM Writer's Group***
 - ***Developed initial SE-oriented content for PSM Version 4.0***



Practical Software and Systems Measurement

Workshop Background

- ***SE Contributors to PSM Version 4.0***
 - ***Garry Roedler***
 - ***Bill Farr***
 - ***Don Gantzer***
 - ***Sarah Sheard***
 - ***Bruce Allgood***
 - ***Joe Caravello***
 - ***Ed Dudash***

Practical Software and Systems Measurement

Workshop Background

- ***Where we're heading***
 - *Need to identify improvements for PSM Version 5*
 - *Want to expand and clarify PSM guidance for SE measurement, particularly measures used for special purposes*
- ***Issues, questions, and topics***
 - *Does the use of TPMs, MOEs, MOPs, and MOSs require additional guidance?*
 - *Does that guidance belong in PSM?*

Practical Software and Systems Measurement

Intended Output

- ***List of PSM topics that need to be expanded to provide practical guidance on using SE product and process measures***
- ***List of topics that need to be added to PSM guidance specifically directed at SE measurement***
- ***Outline of a SE-oriented case study***