Instructor Notes for L02

Personal Software Process for Engineers

# Recommended Order of Presentation

1. Measure Program Size (PowerPoint)
2. ASGKIT\_E\_Simple\_LOC\_Counter (Word) with LOC Counting Template (Word), Coding Standard Template (Word), and C29 C++ Coding Standard (Word)

## Measure Program Size

Previously we introduced effort (Time Log) and defect (Defect Log) measures. This module introduces the idea of program size—or “how big is it?”—to respond to the initial Problem: “Estimating effort is really hard.” The answer, of course, is that size depends primarily on how much code must be written:

Effort = Size (of the code to be written) \* Rate (how fast one can write that code)

The implied process required to complete the assignment is between the traditional PSP0 and PSP0.1 levels.

This lesson introduces both the PSP Planning Framework (now “The Project Planning Framework”) and the SEI Size Measurement Framework, although the latter does not yet delve into the accounting system—that is, (B)ase, (D)eleted, etc., which is introduced in the next lesson. The focus here is on the mechanics of getting a simple, accurate, repeatable overall size count, nominally lines of code (LOC), but the concepts addressed apply to most practical size measures.

The materials do not specify the process changes. However, as a minimal process change, based on script INITIAL, a bullet/substep should be added to the Evaluation step to capture this program’s LOC count. The instructor may decide whether to add an estimation bullet/substep to the Planning phase now (implying a change to capture that information on the Planning Summary) or wait until the next lesson. Another option for the instructor is to skip this assignment and introduce the next lesson, including a process change to a full PSP0.1 that includes LOC type accounting.

## ASGKIT\_E\_Simple\_LOC\_Counter

This is the program to count physical LOC, excluding blank and comment lines. The LOC Counting Template, Coding Standard Template, and C++ Coding Standard (Table C29 from the *Discipline* book) are included, and the discussion in “Measure Program Size” along with the text of the assignment aims the student at defining a LOC counting standard and coding standard together in order to simplify writing the program.

Note that the program requires printing out a listing, with counted line numbers, of the file to be counted.

Document Markings

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