Reducing estimating errors with the CMM

Reducing estimating errors through maturity in the CMM is a primary benefit of process improvement. Estimating tool vendors have attempted to improve accuracy of their models through better data collection and calibration techniques, however the result is still a statistical approximation subject to wide variability. This presentation will identify sources of common cause and special cause variation in program experience and show how achieving Level 2 and 3 maturity ratings can reduce both, thus increasing accuracy of estimates. Attendees will gain an appreciation of the benefits of process maturity as related to reducing the common and special cause variation in their programs. From a statistical viewpoint, uncertainty in the estimate is due to variation in the data. Common cause variation is caused by inherent variability in the system being observed, such as a Configuration Control Board that only meets monthly. Following a repeatable process, as required to reach CMM Level 2, reduces common cause variations. Special cause variations are due to events outside the norm for the system, such as abandoning the documented process for an unprecedented system. Use of an organization standard process with appropriate tailoring guidelines and an effective training program, as required to reach CMM Level 3, will help reduce special cause variations. The knowledge gained from this presentation will allow attendees to look at their specific processes with an eye towards reducing the common and special cause variation and improving estimates. The presenter is Mr. Raymond L. Kile.

BIO

Raymond L. Kile has over thirty years experience with software development and program management. Ray developed the REVIC (Revised Improved COCOMO) model used widely in DOD and industry. He is an SEI-Authorized Software Capability Evaluator active in software process improvement (SPI) and program management consulting. Ray is currently the SPI business manager for the Center for Systems Management (CSM) where he teaches Software Process Improvement, Software Engineering Management, Software Cost Estimating, and Program Management courses. He is a frequent speaker at conferences and seminars. Ray holds a BSEE from the United States Air Force Academy and a MSEE from the University of Missouri.

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