

Software Measurement Is Inherent to Project Success



My belief and dedication in the notion that institutionalized measurement is a critical factor in the success of software projects goes back many years. As a quality manager for a state-of-the-art computer-aided engineering software system, I verified the needs and benefits of measuring and analyzing software product quality more than 15 years ago. Since then I have spent many years in the promotion and improvement of measurement as a basic tool in software and systems development. This issue of CROSS TALK aims to give our readers a few ideas regarding using *measurement* in a software environment.

In *The Nine-Step Metrics Program*, Tim Perkins covers the basics in considering how to set up a measurement program. He provides some insight for beginners on what measurements to collect and how to use measurements once they are collected.

At the other end of the maturity scale, Al Florence's article *CMM Level 4 Quantitative Analysis and Defect Prevention* gives project examples of how the use of rigorous statistics can easily and effectively be used in a software setting. His real-project examples detail how focusing on product quality allows a high maturity organization to move forward in defect prevention.

Lee Fischman's article *Evolving Function Points* analyzes the question: "What is wrong with function points?" He recommends a few changes to current function point methods that would result in a more user-friendly function point standard.

This issue also contains two articles focusing on somewhat unique uses of function points. The first relates to using function points to help measure size and complexity of software algorithms and is written by Nancy Redgate and Charles B. Tichenor. They describe a method that breaks down a mathematical algorithm into its functional components to produce a repeatable and reliable method for determining algorithm size and complexity. The second article is *Applying Function Point Analysis to Requirements Completeness* by Carol Dekkers and Mauricio Aguiar. As the title indicates, this article highlights how the software sizing technique "function point analysis" can be a valuable tool and a structured method for doing a requirements review.

In *Software Measurement Programs and Industry Leadership*, Capers Jones significantly points out that the most successful companies are those with very sophisticated quality and productivity measurement programs in place. He reviews the measures used by leading businesses showing how these are the companies most successful in improving quality and shortening delivery schedules.

Readers should also be aware that a new version of Practical Software and Systems Measurement is being released. The effort has now evolved into an updated version encompassing systems engineering measurements as well as software measurements. Check the Web site at www.psmc.com for this latest version and information on PSM's Technical Working Group meeting scheduled Feb. 13-14, 2001 in Herndon, Va.

I hope this issue of CROSS TALK along with other resources pointed to within this issue will provide the ability to move forward in improving your organization's understanding and use of measurement.



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