Driving Software Quality at a Silicon Valley High-Tech Software Company

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In today's fast-paced high-tech software application market (e.g., software tools that are used in the design of new computer chips), software development teams face incredible challenges to keep up with increasing cost of software maintenance, fast changes in technology complexity and time-to-market pressures. Under these challenges, users of these software tools have been saying that quality issues with their software applications cost them dearly in lost productivity and in missing tight deadlines.

Our presentation describes how a successful software quality management system (QMS) and continuous software quality assessment program (SSQA - Standardized Software Quality Assessment) were deployed at a leading Silicon Valley market-driven software company. These two complementing quality improvement programs were initiated several years ago under "quality partnerships" with several of the company largest customers. These quality partnerships involve the deployment of effective quality management system and conducting periodic mini-assessments with the various software product teams for stimulating continuous quality improvement deployment.

Our presentation describes how the deployment of the software quality management system and the SSQA assessment program contributed to significant improvements in the quality of many software applications and in reducing the number of software bugs – thus reducing the effort and cost for software maintenance.

For leading edge high-tech software companies, quality management has shifted emphasis from merely the reduction of things gone wrong to emphasis on the increase in things done right for the customer. This new emphasis on quality management has fostered an environment of productivity improvement in processes as well as product and service offerings. Equally important, it emphasizes communication, teamwork and employee satisfaction.

QUALITY MANAGEMENT SYSTEM (QMS)

The Quality Management System (QMS) that we implemented at our company is illustrated below.

SSQA QUALITY ASSESSMENT PROGRAM

At our company, we selected the SSQA assessment scheme that have developed by Motorola and adopted by Semi (Semiconductor industry organization) as the most suitable for the electronic design and manufacturing industry. Our presentation provides an example of a proven methodology for implementation of an Quality Assessment scheme for driving quality improvements in the high tech software industry.

With our SSQA assessment program, we quarterly measure the progress of our continuous improvement effort. Our presentation demonstrates how the initial SSQA assessment scoring for a specific product have been improved over a period of two years with continuous improvements.