Guiding Reengineering with the Operational Profile

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Abstract

Results of applied Software Reliability Engineering (SRE) processes and tools on two teleconference support systems are documented. Beginning with the initial evaluation of SRE technology for AT&T's TeleConference Service Development in 1992, this presentation covers the eventual use of SRE in many phases of software development for two separate systems. Introduction of SRE into the system test and production support processes of a legacy system, in conjunction with other development process improvements, brought early rewards in quality and timely delivery. SRE provided a gauge by which quality efforts could be measured. Ramp up time and costs, as well as both successes and failures in the implementation of SRE are discussed. Next, presentation of preliminary findings regarding the use of SRE during the analysis, design, and integration testing phases of a next generation Client/Server conferencing system are discussed. Reuse of an Operational Profile and SRE tools originally developed and deployed for the legacy system to guide design on a new mixed platform Client/Server architecture incorporating a Windows interface and Unix application server is explained. Lastly, a discussion of the appropriateness of SRE methods for both traditional functional decomposition techniques and Object-Oriented analysis and design is offered.