

Software Estimation Experiences at Xerox

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ABSTRACT

This presentation is an overview of recent software estimation process improvements at Xerox. In this presentation, corporate-, business group- and project-level estimation experiences are analyzed. These efforts were initiated to dramatically improve time to market. At the corporate level, the schedule slip-rate metric was developed for this purpose.

Conceptually, the slip-rate reduction model involves the following components:

- Defining benchmark schedules for the program
- Increasing the estimation accuracy in establishing the schedules
- Rigorous tracking of schedule slip by life-cycle phases for tighter control

The Xerox Corporate Engineering Center (CEC) has a key role in defining benchmark data that can be used by the programs. We will describe how the CEC is planning to apply COCOMO in this activity, and other approaches that have been used.

Addressing the estimation accuracy issue primarily involves the selection of a small set of cost estimation methods and tools. This is really a Business Group-level problem, since as part of their CMM Level-3 operation, these entities are responsible for providing standard organizational processes. Recent experiences of Business Group-level pilot studies will be analyzed.

Some of the specifics that will be discussed, are:

- The dependency of Cost Estimation on Size Estimation
- Barriers to efficient Software Size Estimation
- Side effects of the CMM implementation
- Critical Cultural and Management barriers affecting Software Cost Estimation

KEYWORDS:

COCOMO, SLOC, CMM, slip-rate, sizing

BIOGRAPHY

Dr. Peter Hantos is Manager, Process Technology, and member of the Office Systems Group's SEPG at Xerox. He has been the Xerox Liaison in the CSE/USC Industrial Affiliates Program since 1994. His prior position was Department Manager for Software Quality Assurance, Software Process Improvement, System and the Reliability Testing areas. Earlier he was Principal Scientist at the Xerox Corporate Software Engineering Center, where he authored the TTM Software Subprocess and the Software Technology Readiness corporate-wide processes. He also had an extensive academic career as Assistant Professor, first at the Budapest Institute of Technology (BIT), and later at UC Santa Barbara. He holds MS and PhD degrees in Electrical Engineering from BIT. Dr. Hantos is Senior Member of the IEEE, and Member, ACM.

