Software Process Dynamics

Description: Advance Praise for Software Process Dynamics

"Not only the best software engineering book of 2007, but quite possibly the most important book of this entire decade."
Ed Yourdon, internationally recognized consultant and author of twenty-seven books, including Death March

"A major and much needed new textbook. . . . [It] contains a wealth of material covering all important aspects of software project dynamics."
Dr. Tarek Abdel-Hamid, Professor in the Graduate School of Business and Public Policy, the Naval Postgraduate School

"Brings together a tremendous amount of useful process modeling material and experience in using it in practical software decision situations. . . . [It] will serve as a standard reference for the software process dynamics field."
Dr. Barry Boehm, Professor in the Computer Science and Industrial Systems Engineering Departments, University of Southern California

This book is designed for professionals and students in software engineering or information technology who are interested in understanding the dynamics of software development in order to assess and optimize their own process strategies. Software Process Dynamics successfully explains how simulation of interrelated technical and social factors can provide a means for organizations to vastly improve their processes. It is structured for readers to approach the subject from different perspectives, and includes descriptive summaries of the best research and applications. This self-contained book:

Provides methods, tools, models, and examples to improve management decision-making at all levels

Illustrates systems thinking in action to develop increasingly deep understandings of software process structures and behaviors

Describes the full modeling process, including calibration of models to software metrics data

Shows basic building blocks and model infrastructures for software processes

Demonstrates how others have used the principles of systems dynamics to analyze and improve processes, and summarizes all previous publications

Provides future research motivations

Software Process Dynamics is complete with exercises and executable models available on a related Web site that allow readers to learn hands-on and with the flexibility to go at their own pace. Furthermore, updates to the book's chapters will be available on this Web site to keep readers up-to-date with the most current and emerging models and techniques. This is an invaluable reference for software engineers, IT practitioners, engineering process groups, project planners, managers, and executives who wish to improve their processes and be better informed. It also serves as an effective textbook for students in related courses at the upper-undergraduate and graduate levels.

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