
Bookmark File PDF Hardcover Engineering Software In Series Sei Improvement Product And Integration Process For Guidelines Development For Cmmi

Thank you very much for downloading **Hardcover Engineering Software In Series Sei Improvement Product And Integration Process For Guidelines Development For Cmmi**. Maybe you have knowledge that, people have see numerous period for their favorite books considering this Hardcover Engineering Software In Series Sei Improvement Product And Integration Process For Guidelines Development For Cmmi, but stop happening in harmful downloads.

Rather than enjoying a good book gone a mug of coffee in the afternoon, instead they juggled gone some harmful virus inside their computer. **Hardcover Engineering Software In Series Sei Improvement Product And Integration Process For Guidelines Development For Cmmi** is available in our digital library an online entrance to it is set as public so you can download it instantly. Our digital library saves in combined countries, allowing you to acquire the most less latency time to download any of our books in the same way as this one. Merely said, the Hardcover Engineering Software In Series Sei Improvement Product And Integration Process For Guidelines Development For Cmmi is universally compatible bearing in mind any devices to read.

KEY=INTEGRATION - KRISTA MELINA

CMMI FOR DEVELOPMENT

GUIDELINES FOR PROCESS INTEGRATION AND PRODUCT IMPROVEMENT

Pearson Education *CMMI® for Development (CMMI-DEV) describes best practices for the development and maintenance of products and services across their lifecycle. By integrating essential bodies of knowledge, CMMI-DEV provides a single, comprehensive framework for organizations to assess their development and maintenance processes and improve performance. Already widely adopted throughout the world for disciplined, high-quality engineering, CMMI-DEV Version 1.3 now accommodates other modern approaches as well, including the use of Agile methods, Lean Six Sigma, and architecture-centric development. CMMI® for Development, Third Edition, is the definitive reference for CMMI-DEV Version 1.3. The authors have revised their tips, hints, and cross-references, which appear in the margins of the book, to help you better understand, apply, and find information about the content of each process area. The book includes new and updated perspectives on CMMI-DEV in which people influential in the model's creation, development, and transition share brief but valuable insights. It also features four new case studies and five contributed essays with practical advice for adopting and using CMMI-DEV. This book is an essential resource—whether you are new to CMMI-DEV or are familiar with an earlier version—if you need to know about, evaluate, or put the latest version of the model into practice. The book is divided into three parts. Part One offers the broad view of CMMI-DEV, beginning with basic concepts of process improvement. It introduces the process areas, their components, and their relationships to each other. It describes effective paths to the adoption and use of CMMI-DEV for process improvement and benchmarking, all illuminated with fresh case studies and helpful essays. Part Two, the bulk of the book, details the generic goals and practices and the twenty-two process areas now comprising CMMI-DEV. The process areas are organized alphabetically by acronym for easy reference. Each process area includes goals, best practices, and examples. Part Three contains several useful resources, including CMMI-DEV-related references, acronym definitions, a glossary of terms, and an index.*

INTEGRATING CMMI AND AGILE DEVELOPMENT

CASE STUDIES AND PROVEN TECHNIQUES FOR FASTER PERFORMANCE IMPROVEMENT

Pearson Education *Many organizations that have improved process maturity through Capability Maturity Model Integration (CMMI®) now also want greater agility. Conversely, many organizations that are succeeding with Agile methods now want the benefits of more mature processes. The solution is to integrate CMMI and Agile. Integrating CMMI® and Agile Development offers broad guidance for melding these process improvement methodologies. It presents six detailed case studies, along with essential real-world lessons, big-picture insights, and mistakes to avoid. Drawing on decades of process improvement experience, author Paul McMahon explains how combining an Agile approach with the CMMI process improvement framework is the fastest, most effective way to achieve your business objectives. He offers practical, proven techniques for CMMI and Agile integration, including new ways to extend Agile into system engineering and project management and to optimize performance by focusing on your organization's unique, culture-related weaknesses.*

CMM IN PRACTICE

PROCESSES FOR EXECUTING SOFTWARE PROJECTS AT INFOSYS

Addison-Wesley Professional *Project initiation; Project planning; Project execution and termination.*

CMMI FOR SERVICES

GUIDELINES FOR SUPERIOR SERVICE

Pearson Education *CMMI® for Services (CMMI-SVC) is a comprehensive set of guidelines to help organizations establish and improve processes for delivering services. By adapting and extending proven standards and best practices to reflect the unique challenges faced in service industries, CMMI-SVC offers providers a practical and focused framework for achieving higher levels of service quality, controlling costs, improving schedules, and ensuring user satisfaction. A member of the newest CMMI model, CMMI-SVC Version 1.3, reflects changes to the model made for all constellations, including clarifications of high-maturity practices, alignment of the sixteen core process areas, and improvements in the SCAMPI appraisal method. The indispensable CMMI® for Services, Second Edition, is both an introduction to the CMMI-SVC model and an authoritative reference for it. The contents include the complete model itself, formatted for quick reference. In addition, the book's authors have refined the model's introductory chapters; provided marginal notes to clarify the nature of particular process areas and to show why their practices are valuable; and inserted longer sidebars to explain important concepts. Brief essays by people with experience in different application areas further illustrate how the model works in practice and what benefits it offers. The book is divided into three parts. Part One begins by thoroughly explaining CMMI-SVC, its concepts, and its use. The authors provide robust information about service concepts, including a discussion of lifecycles in service environments; outline how to start using CMMI-SVC; explore how to achieve process improvements that last; and offer insights into the relationships among process areas. Part Two describes generic goals and practices, and then details the complete set of twenty-four CMMI-SVC process areas, including specific goals, specific practices, and examples. The process areas are organized alphabetically by acronym and are tabbed for easy reference. Part Three contains several useful resources, including CMMI-SVC-related references, acronym definitions, a glossary of terms, and an index. Whether you are new to CMMI models or are already familiar with one or more of them, this book is an essential resource for service providers interested in learning about or implementing process improvement.*

DATA WAREHOUSE

FROM ARCHITECTURE TO IMPLEMENTATION

Addison-Wesley Professional *Data warehousing is one of the hottest topics in the computing industry. Written by Barry Devlin, one of the world's leading experts on data warehousing, this book gives you the insights and experiences gained over 10 years and offers the most comprehensive, practical guide to designing, building, and implementing a successful data warehouse. Included in this vital information is an explanation of the optimal three-tiered architecture for the data warehouse, with a clear division between data and information. Information systems managers will appreciate the full description of the functions needed to implement such an architecture, including reconciling existing, diverse data and deriving consistent, valuable business information.*

CMMI FOR DEVELOPMENT

GUIDELINES FOR PROCESS INTEGRATION AND PRODUCT IMPROVEMENT

Addison-Wesley Professional *CMMI® for Development (CMMI-DEV) describes best practices for the development and maintenance of products and services across their lifecycle. By integrating essential bodies of knowledge, CMMI-DEV provides a single, comprehensive framework for organizations to assess their development and maintenance processes and improve performance. Already widely adopted throughout the world for disciplined, high-quality engineering, CMMI-DEV Version 1.3 now accommodates other modern approaches as well, including the use of Agile methods, Lean Six Sigma, and architecture-centric development. CMMI® for Development, Third Edition, is the definitive reference for CMMI-DEV Version 1.3. The authors have revised their tips, hints, and cross-references, which appear in the margins of the book, to help you better understand, apply, and find information about the content of each process area. The book includes new and updated perspectives on CMMI-DEV in which people influential in the model's creation, development, and transition share brief but valuable insights. It also features four new case studies and five contributed essays with practical advice for adopting and using CMMI-DEV. This book is an essential resource—whether you are new to CMMI-DEV or are familiar with an earlier version—if you need to know about, evaluate, or put the latest version of the model into practice. The book is divided into three parts. Part One offers the broad view of CMMI-DEV, beginning with basic concepts of process improvement. It introduces the process areas, their*

components, and their relationships to each other. It describes effective paths to the adoption and use of CMMI-DEV for process improvement and benchmarking, all illuminated with fresh case studies and helpful essays. Part Two, the bulk of the book, details the generic goals and practices and the twenty-two process areas now comprising CMMI-DEV. The process areas are organized alphabetically by acronym for easy reference. Each process area includes goals, best practices, and examples. Part Three contains several useful resources, including CMMI-DEV-related references, acronym definitions, a glossary of terms, and an index.

PROCESS IMPROVEMENT AND CMMI FOR SYSTEMS AND SOFTWARE

CRC Press *Process Improvement and CMMI for Systems and Software provides a workable approach for achieving cost-effective process improvements for systems and software. Focusing on planning, implementation, and management in system and software processes, it supplies a brief overview of basic strategic planning models and covers fundamental concepts and appr*

JAVA CODING GUIDELINES

75 RECOMMENDATIONS FOR RELIABLE AND SECURE PROGRAMS

Addison-Wesley “A must-read for all Java developers. . . . Every developer has a responsibility to author code that is free of significant security vulnerabilities. This book provides realistic guidance to help Java developers implement desired functionality with security, reliability, and maintainability goals in mind.” –Mary Ann Davidson, Chief Security Officer, Oracle Corporation Organizations worldwide rely on Java code to perform mission-critical tasks, and therefore that code must be reliable, robust, fast, maintainable, and secure. Java™ Coding Guidelines brings together expert guidelines, recommendations, and code examples to help you meet these demands. Written by the same team that brought you *The CERT® Oracle® Secure Coding Standard for Java™*, this guide extends that previous work’s expert security advice to address many additional quality attributes. You’ll find 75 guidelines, each presented consistently and intuitively. For each guideline, conformance requirements are specified; for most, noncompliant code examples and compliant solutions are also offered. The authors explain when to apply each guideline and provide references to even more detailed information. Reflecting pioneering research on Java security, *Java™ Coding Guidelines* offers updated techniques for protecting against both deliberate attacks and other unexpected events. You’ll find best practices for improving code reliability and clarity, and a full chapter exposing common misunderstandings that lead to suboptimal code. With a Foreword by James A. Gosling, Father of the Java Programming Language

EVALUATING SOFTWARE ARCHITECTURES

Pearson Education India *This Book Describes Systematic Methods For Evaluating Software Architectures And Applies Them To Real-Life Cases. Evaluating Software Architectures Introduces The Conceptual Background For Architecture Evaluation And Provides A Step-By-Step Guide To The Process Based On Numerous Evaluations Performed In Government And Industry.*

TSP(SM) COACHING DEVELOPMENT TEAMS

Pearson Education *Most modern software development projects require teams, and good teamwork largely determines a project’s success. The Team Software Process (TSP), created by Watts S. Humphrey, is a set of engineering practices and team concepts that produce effective teams, thereby helping developers deliver high-quality products on time and within budget. TSP bridges Humphrey’s seminal work on the Capability Maturity Model (CMM), an improvement framework for the entire software organization, and his Personal Software Process (PSP), practices designed to improve the work of individual developers. Typical first-time TSP teams increase productivity by more than 50 percent while greatly increasing the quality of their delivered products. However, TSP teams only continue to improve under the guidance of a capable coach. One industrial-strength team, for example, increased its productivity by an additional 94 percent and reduced test defects by 85 percent through three consecutive TSP quarterly product release cycles. Without competent coaching, teams often do not progress much beyond the initial one-time improvement seen after the introduction of the TSP. Humphrey distinguishes between TSP coaching and TSP leadership, explaining why the skillful performance of both functions is critical. In this practical guide, he shares coaching methods that have repeatedly inspired TSP teams and steered them toward success. With the help of a coach, TSP teams undergo a brief but intense project launch in which they define their own processes, make their own plans, and negotiate their commitments with management, resulting in dramatically enhanced performance. Whether you are considering the TSP or are actively implementing it, TSPSM-Coaching Development Teams provides the invaluable examples, guidelines, and suggestions you need to get started and keep developing as a team coach. It’s meant to complement Humphrey’s other books, TSPSM-Leading a Development Team and PPSM: A Self-Improvement Process for Software Engineers. Together, the three works offer a rich resource for improving your software development capabilities.*

MANAGING RISK

METHODS FOR SOFTWARE SYSTEMS DEVELOPMENT

Addison-Wesley Professional *"The increasing rate of technological change we are experiencing in our lifetime yields competitive advantage to organizations and individuals who are willing to embrace risk and the opportunities it presents. Those who choose to minimize or avoid risk, as opposed to managing it, set a course for obsolescence. Hall has captured the essence of risk management and given us a practical guide for the application of useful principles in software-intensive product development. This is must reading for public and private sector managers who want to succeed as we begin the next century."* - Daniel P. Czelusniak, Director, Acquisition Program Integration Office of the Under Secretary of Defense (Acquisition and Technology) The Pentagon *"Since it is more than just common sense, the newcomer to risk management needs an intelligent guide. It is in this role that Elaine Hall's book excels. This book provides a set of practical and well-delineated processes for implementation of the discipline."* - Tom DeMarco, from the Foreword *Risk is inherent in the development of any large software system. A common approach to risk in software development is to ignore it and hope that no serious problems occur. Leading software companies use quantitative risk management methods as a more useful approach to achieve success. Written for busy professionals charged with delivering high-quality products on time and within budget, Managing Risk is a comprehensive guide that describes a success formula for managing software risk. The book is divided into five parts that describe a risk management road map designed to take you from crisis to control of your software project. Highlights include: Six disciplines for managing product development. Steps to predictable risk-management process results. How to establish the infrastructure for a risk-aware culture. Methods for the implementation of a risk management plan. Case studies of people in crisis and in control.*

EVALUATING SOFTWARE ARCHITECTURES

METHODS AND CASE STUDIES

Addison-Wesley Professional *The foundation of any software system is its architecture. Using this book, you can evaluate every aspect of architecture in advance, at remarkably low cost -- identifying improvements that can dramatically improve any system's performance, security, reliability, and maintainability. As the practice of software architecture has matured, it has become possible to identify causal connections between architectural design decisions and the qualities and properties that result downstream in the systems that follow from them. This book shows how, offering step-by-step guidance, as well as detailed practical examples -- complete with sample artifacts reflective of those that evaluators will encounter. The techniques presented here are applicable not only to software architectures, but also to system architectures encompassing computing hardware, networking equipment, and other elements. For all software architects, software engineers, developers, IT managers, and others responsible for creating, evaluating, or implementing software architectures.*

THE CERT ORACLE SECURE CODING STANDARD FOR JAVA

Addison-Wesley Professional *The only comprehensive set of guidelines for secure Java programming - from the field's leading organizations, CERT and Oracle • •Authoritative, end-to-end code-level requirements for building secure systems with any recent version of Java, including the new Java 7 •Presents techniques that also improve safety, reliability, dependability, robustness, availability, maintainability, and other attributes of quality. •Includes extensive risk assessment guidance, plus references for further information. This is the first authoritative, comprehensive compilation of code-level requirements for building secure systems in Java. Organized by CERT's pioneering software security experts, with support from Oracle's own Java platform developers, it covers every facet of secure software coding with Java 7 SE and Java 6 SE, and offers value even to developers working with other Java versions. The authors itemize the most common coding errors leading to vulnerabilities in Java programs, and provide specific guidelines for avoiding each of them. They show how to produce programs that are not only secure, but also safer, more reliable, more robust, and easier to maintain. After a high-level introduction to Java application security, eighteen consistently-organized chapters detail specific guidelines for each facet of Java development. Each set of guidelines defines conformance, presents both noncompliant examples and corresponding compliant solutions, shows how to assess risk, and offers references for further information. To limit this book's size, the authors focus on 'normative requirements': strict rules for what programmers must do for their work to be secure, as defined by conformance to specific standards that can be tested through automated analysis software. (Note: A follow-up book will present 'non-normative requirements': recommendations for what Java developers typically 'should' do to further strengthen program security beyond testable 'requirements.')*

MANAGING THE SOFTWARE PROCESS

Addison-Wesley Professional *The author, drawing on years of experience at IBM and the SEI, provides here practical guidance for improving the software development and maintenance process. He focuses on understanding and managing the software process because this is where he feels organizations now encounter the most serious problems, and where he feels there is the best opportunity for significant improvement. Both program managers and practicing programmers, whether working on small programs or large-scale projects, will learn how good their own software process is, how they can make their process better, and where they need to begin. "This book will help you move beyond the turning point, or crisis, of feeling over-whelmed by the task of managing the software process to understanding what is essential in software management and what you can do about it." Peter Freeman, from the Foreword 0201180952B04062001*

CYBER SECURITY ENGINEERING

A PRACTICAL APPROACH FOR SYSTEMS AND SOFTWARE ASSURANCE

Addison-Wesley Professional *Cyber Security Engineering is the definitive modern reference and tutorial on the full range of capabilities associated with modern cyber security engineering. Pioneering software assurance experts Dr. Nancy R. Mead and Dr. Carol C. Woody bring together comprehensive best practices for building software systems that exhibit superior operational security, and for considering security throughout your full system development and acquisition lifecycles. Drawing on their pioneering work at the Software Engineering Institute (SEI) and Carnegie Mellon University, Mead and Woody introduce seven core principles of software assurance, and show how to apply them coherently and systematically. Using these principles, they help you prioritize the wide range of possible security actions available to you, and justify the required investments. Cyber Security Engineering guides you through risk analysis, planning to manage secure software development, building organizational models, identifying required and missing competencies, and defining and structuring metrics. Mead and Woody address important topics, including the use of standards, engineering security requirements for acquiring COTS software, applying DevOps, analyzing malware to anticipate future vulnerabilities, and planning ongoing improvements. This book will be valuable to wide audiences of practitioners and managers with responsibility for systems, software, or quality engineering, reliability, security, acquisition, or operations. Whatever your role, it can help you reduce operational problems, eliminate excessive patching, and deliver software that is more resilient and secure.*

SOFTWARE ARCHITECTURE IN PRACTICE

Addison-Wesley Professional *This is the eagerly-anticipated revision to one of the seminal books in the field of software architecture which clearly defines and explains the topic.*

SOFTWARE PROCESS IMPROVEMENT AND CAPABILITY DETERMINATION

11TH INTERNATIONAL CONFERENCE, SPICE 2011, DUBLIN, IRELAND, MAY 30 - JUNE 1, 2011. PROCEEDINGS

Springer *This book constitutes the refereed proceedings of the 11th International Conference on Software Process Improvement and Capability Determination, SPICE 2011, held in Dublin, Ireland, in May/June 2011. The 15 revised full papers presented and 15 short papers were carefully reviewed and selected from numerous submissions. The papers are organized in topical sections on process modelling and assessment, safety and security, medi SPICE, high maturity, implementation and improvement.*

ARCHITECTURE-CENTRIC SOFTWARE PROJECT MANAGEMENT

A PRACTICAL GUIDE

Addison-Wesley Professional *To fully leverage the value of software architecture in enterprise development projects, you need to expressly and consciously link architecture with project management. This book shows how, drawing on powerful lessons learned at Siemens, one of the world's leading software development organizations. The authors offer insight into project management for software architects, insight into software architecture for project managers, and above all, insight into integrating the two disciplines to maximize the effectiveness of both of them. Learn how to develop cost and schedule estimates for development projects, based on software architecture; how to clarify architecture so projects can be more effectively planned and managed; and then how to use architecture to organize, implement, and measure the project iteratively as work progresses.*

CMMI: GUIDELINES FOR PROCESS INTEGRATION AND PRODUCT IMPROVEMENT, SECOND EDITION

REFLECTIONS ON MANAGEMENT

HOW TO MANAGE YOUR SOFTWARE PROJECTS, YOUR TEAMS, YOUR BOSS, AND YOURSELF

Pearson Education *A Lifetime of Invaluable Management Insights from Legendary Software Quality Guru Watts S. Humphrey In 1986, Watts S. Humphrey made an outrageous commitment: a promise to transform software development. As the pioneering innovator behind SEI's Capability Maturity Model (CMM), Personal Software Process (PSP), and Team Software Process (TSP), Humphrey has more than met that promise. But his contributions go beyond methodology: For decades, his deeply personal writings on project management have been admired by software engineers worldwide. Reflections on*

Management brings together Humphrey's best and most influential essays and articles--sharing insights that will be indispensable for anyone who must achieve superior results in software or any other endeavor. Collected here for the first time, these works offer compelling insights into everything from planning day-to-day work to improving quality, encouraging teamwork to becoming a truly great leader. All of these writings share a powerful vision, grounded by a life in software that has extended across nearly six decades. The vision is this: To succeed, professionals must effectively manage for more than plans, schedules, and code--they must manage teams, bosses, and above all, themselves.

CMMI FOR ACQUISITION

GUIDELINES FOR IMPROVING THE ACQUISITION OF PRODUCTS AND SERVICES

Addison-Wesley Professional CMMI® for Acquisition (CMMI-ACQ) describes best practices for the successful acquisition of products and services. Providing a practical framework for improving acquisition processes, CMMI-ACQ addresses the growing trend in business and government for organizations to purchase or outsource required products and services as an alternative to in-house development or resource allocation. Changes in CMMI-ACQ Version 1.3 include improvements to high maturity process areas, improvements to the model architecture to simplify use of multiple models, and added guidance about using preferred suppliers. CMMI® for Acquisition, Second Edition, is the definitive reference for CMMI-ACQ Version 1.3. In addition to the entire revised CMMI-ACQ model, the book includes updated tips, hints, cross-references, and other author notes to help you understand, apply, and quickly find information about the content of the acquisition process areas. The book now includes more than a dozen contributed essays to help guide the adoption and use of CMMI-ACQ in industry and government. Whether you are new to CMMI models or are already familiar with one or more of them, you will find this book an essential resource for managing your acquisition processes and improving your overall performance. The book is divided into three parts. Part One introduces CMMI-ACQ in the broad context of CMMI models, including essential concepts and useful background. It then describes and shows the relationships among all the components of the CMMI-ACQ process areas, and explains paths to the adoption and use of the model for process improvement and benchmarking. Several original essays share insights and real experiences with CMMI-ACQ in both industry and government environments. Part Two first describes generic goals and generic practices, and then details the twenty-two CMMI-ACQ process areas, including specific goals, specific practices, and examples. These process areas are organized alphabetically and are tabbed by process area acronym to facilitate quick reference. Part Three provides several useful resources, including sources of further information about CMMI and CMMI-ACQ, acronym definitions, a glossary of terms, and an index.

TSP--LEADING A DEVELOPMENT TEAM

Pearson Education Watts Humphrey, inventor of CMM, PSP, & TSP provides team leaders with a whole new way of leading an effective development team.

SECURE CODING IN C AND C++

Pearson Education "The security of information systems has not improved at a rate consistent with the growth and sophistication of the attacks being made against them. To address this problem, we must improve the underlying strategies and techniques used to create our systems. Specifically, we must build security in from the start, rather than append it as an afterthought. That's the point of Secure Coding in C and C++. In careful detail, this book shows software developers how to build high-quality systems that are less vulnerable to costly and even catastrophic attack. It's a book that every developer should read before the start of any serious project." --Frank Abagnale, author, lecturer, and leading consultant on fraud prevention and secure documents Learn the Root Causes of Software Vulnerabilities and How to Avoid Them Commonly exploited software vulnerabilities are usually caused by avoidable software defects. Having analyzed nearly 18,000 vulnerability reports over the past ten years, the CERT/Coordination Center (CERT/CC) has determined that a relatively small number of root causes account for most of them. This book identifies and explains these causes and shows the steps that can be taken to prevent exploitation. Moreover, this book encourages programmers to adopt security best practices and develop a security mindset that can help protect software from tomorrow's attacks, not just today's. Drawing on the CERT/CC's reports and conclusions, Robert Seacord systematically identifies the program errors most likely to lead to security breaches, shows how they can be exploited, reviews the potential consequences, and presents secure alternatives. Coverage includes technical detail on how to Improve the overall security of any C/C++ application Thwart buffer overflows and stack-smashing attacks that exploit insecure string manipulation logic Avoid vulnerabilities and security flaws resulting from the incorrect use of dynamic memory management functions Eliminate integer-related problems: integer overflows, sign errors, and truncation errors Correctly use formatted output functions without introducing format-string vulnerabilities Avoid I/O vulnerabilities, including race conditions Secure Coding in C and C++ presents hundreds of examples of secure code, insecure code, and exploits, implemented for Windows and Linux. If you're responsible for creating secure C or C++ software--or for keeping it safe--no other book offers you this much detailed, expert assistance.

THE CERT GUIDE TO SYSTEM AND NETWORK SECURITY PRACTICES

Addison-Wesley Professional *Showing how to improve system and network security, this guide explores the practices and policies of deploying firewalls, securing network servers, securing desktop workstations, intrusion detection, response, and recovery.*

BEYOND CHAOS

THE EXPERT EDGE IN MANAGING SOFTWARE DEVELOPMENT

Addison-Wesley Professional *In Beyond Chaos, the keenest contributions to the Management Forum have been incorporated into a single volume to reveal best practices in managing software projects and organizations. The forty-five essays contained in this book are written by many of the leading names in software development, software engineering, and technical management. Each piece has been selected and edited to provide highly focused ideas and suggestions that can be translated into immediate practice. Pragmatic and provocative, they address key management concerns involving people, planning and productivity, coping under pressure, quality, development processes, and leadership and teamwork.*

DOCUMENTING SOFTWARE ARCHITECTURES

VIEWS AND BEYOND

Addison-Wesley Professional *Architecture is crucial to the success of any large software system -- but even a superb architecture will fail if it isn't communicated well. Now, there's a language- and notation-independent guide to capturing architecture so it can be used successfully by every analyst, software designer, and developer. The authors review the diverse goals and uses of software architecture documentation, providing documentation strategies for several common scenarios. They identify the basic unit of software architecture documentation: the viewtype, which specifies the type of information to be provided in an architectural view. For each viewtype -- Modules, Component-and-Connectors, and Allocation -- they offer detailed guidance on documenting what really matters. Next, they demonstrate how to package architecture documentation in coherent, usable form: augmenting architectural views with documentation of interfaces and behavior; accounting for architectural variability and dynamic systems; and more.*

PSP(SM)

A SELF-IMPROVEMENT PROCESS FOR SOFTWARE ENGINEERS

Addison-Wesley Professional *Most software-development groups have embarrassing records: By some accounts, more than half of all software projects are significantly late and over budget, and nearly a quarter of them are cancelled without ever being completed. Although developers recognize that unrealistic schedules, inadequate resources, and unstable requirements are often to blame for such failures, few know how to solve these problems. Fortunately, the Personal Software Process (PSP) provides a clear and proven solution. Comprising precise methods developed over many years by Watts S. Humphrey and the Software Engineering Institute (SEI), the PSP has successfully transformed work practices in a wide range of organizations and has already produced some striking results. This book describes the PSP and is the definitive guide and reference for its latest iteration. PSP training focuses on the skills required by individual software engineers to improve their personal performance. Once learned and effectively applied, PSP-trained engineers are qualified to participate on a team using the Team Software Process (TSP), the methods for which are described in the final chapter of the book. The goal for both PSP and TSP is to give developers exactly what they need to deliver quality products on predictable schedules. PSPSM: A Self-Improvement Process for Software Engineers presents a disciplined process for software engineers and anyone else involved in software development. This process includes defect management, comprehensive planning, and precise project tracking and reporting. The book first scales down industrial software practices to fit the needs of the module-sized program development, then walks readers through a progressive sequence of practices that provide a sound foundation for large-scale software development. By doing the exercises in the book, and using the PSP methods described here to plan, evaluate, manage, and control the quality of your own work, you will be well prepared to apply those methods on ever larger and more critical projects. Drawing on the author's extensive experience helping organizations to achieve their development goals, and with the PSP benefits well illustrated, the book presents the process in carefully crafted steps. The first chapter describes overall principles and strategies. The next two explain how to follow a defined process, as well as how to gather and use the data required to manage a programming job. Several chapters then cover estimating and planning, followed by quality management and design. The last two chapters show how to put the PSP to work, and how to use it on a team project. A variety of support materials for the book, as described in the Preface, are available on the Web. If you or your organization are looking for a way to improve your project success rate, the PSP could well be your answer.*

BUILDING SYSTEMS FROM COMMERCIAL COMPONENTS

SEI Software Engineering A principal source of risk in component-based software design, say Wallnau and two other technicians at the institute, Scott A. Hissam and Robert C. Seacord, is a lack of knowledge about how components should be integrated and how they behave when integrated. To mitigate that risk, they introduce several concepts, among them the component ensemble as a design abstraction, blackboards as a fundamental design notation, and a process for exposing design risk. They speak to practicing and student software engineers. c. Book News Inc.

THE CERT GUIDE TO INSIDER THREATS

HOW TO PREVENT, DETECT, AND RESPOND TO INFORMATION TECHNOLOGY CRIMES (THEFT, SABOTAGE, FRAUD)

Addison-Wesley Since 2001, the CERT® Insider Threat Center at Carnegie Mellon University's Software Engineering Institute (SEI) has collected and analyzed information about more than seven hundred insider cyber crimes, ranging from national security espionage to theft of trade secrets. The CERT® Guide to Insider Threats describes CERT's findings in practical terms, offering specific guidance and countermeasures that can be immediately applied by executives, managers, security officers, and operational staff within any private, government, or military organization. The authors systematically address attacks by all types of malicious insiders, including current and former employees, contractors, business partners, outsourcers, and even cloud-computing vendors. They cover all major types of insider cyber crime: IT sabotage, intellectual property theft, and fraud. For each, they present a crime profile describing how the crime tends to evolve over time, as well as motivations, attack methods, organizational issues, and precursor warnings that could have helped the organization prevent the incident or detect it earlier. Beyond identifying crucial patterns of suspicious behavior, the authors present concrete defensive measures for protecting both systems and data. This book also conveys the big picture of the insider threat problem over time: the complex interactions and unintended consequences of existing policies, practices, technology, insider mindsets, and organizational culture. Most important, it offers actionable recommendations for the entire organization, from executive management and board members to IT, data owners, HR, and legal departments. With this book, you will find out how to Identify hidden signs of insider IT sabotage, theft of sensitive information, and fraud Recognize insider threats throughout the software development life cycle Use advanced threat controls to resist attacks by both technical and nontechnical insiders Increase the effectiveness of existing technical security tools by enhancing rules, configurations, and associated business processes Prepare for unusual insider attacks, including attacks linked to organized crime or the Internet underground By implementing this book's security practices, you will be incorporating protection mechanisms designed to resist the vast majority of malicious insider attacks.

DESIGNING SOFTWARE ARCHITECTURES

A PRACTICAL APPROACH

Addison-Wesley Professional Designing Software Architectures will teach you how to design any software architecture in a systematic, predictable, repeatable, and cost-effective way. This book introduces a practical methodology for architecture design that any professional software engineer can use, provides structured methods supported by reusable chunks of design knowledge, and includes rich case studies that demonstrate how to use the methods. Using realistic examples, you'll master the powerful new version of the proven Attribute-Driven Design (ADD) 3.0 method and will learn how to use it to address key drivers, including quality attributes, such as modifiability, usability, and availability, along with functional requirements and architectural concerns. Drawing on their extensive experience, Humberto Cervantes and Rick Kazman guide you through crafting practical designs that support the full software life cycle, from requirements to maintenance and evolution. You'll learn how to successfully integrate design in your organizational context, and how to design systems that will be built with agile methods. Comprehensive coverage includes Understanding what architecture design involves, and where it fits in the full software development life cycle Mastering core design concepts, principles, and processes Understanding how to perform the steps of the ADD method Scaling design and analysis up or down, including design for pre-sale processes or lightweight architecture reviews Recognizing and optimizing critical relationships between analysis and design Utilizing proven, reusable design primitives and adapting them to specific problems and contexts Solving design problems in new domains, such as cloud, mobile, or big data

WINNING WITH SOFTWARE

AN EXECUTIVE STRATEGY

Addison-Wesley Professional "Every senior executive needs to read this book." --Robert Musson Vice President, Business Strategy Cenus Technologies "An informative book for any business person (not just technologists) who has ever been associated or involved with a software development effort and thought 'there must be a better way!' Watts has provided that better way-- the PSP/TSP, and a great book." --Roy Kinkaid, Head of Continuous Improvement and Software Quality Assurance, EBS Dealing Resources Watts Humphrey is the well-known author of methods and models widely used by

organizations, teams, and individuals to improve the efficiency and effectiveness of software development. In *Winning with Software*, he shows corporate executives and senior managers why software is both a business problem and a business opportunity. "This book is extremely well written and targets the right audience. I plan to buy a copy for each of my executives." --Kevin J. Berk, Director, Process Improvement, Total Quality Systems Humphrey, drawing on his own extensive executive and management experience, first demonstrates the critical importance of software to nearly every business, large and small. He then outlines seven steps needed to gain control of a software operation and transform it into a professional, businesslike engineering function. Failure to recognize the importance of software, and to take charge of its development process, runs the risk of damaging the entire business. By contrast, Humphrey relates the substantial benefits real organizations have obtained from such awareness and control, and he concludes with an analysis of the impressive financial returns the recommended transformations typically yield. "This is a great book that will play a valuable role. It has excellent anecdotes that illustrate the points being made, as well as good examples depicting the problems faced by teams and managers. I look forward to sharing it with my colleagues." --Steven Sliwa, President & CEO, Insitu Group Inc. and former President of Embry-Riddle University "The logical approach, the high level explanations, and the application of real-life experiences make the book not only credible but easily understood. If a large number of CEOs don't at least try out the book's concepts, I will be greatly surprised." --David Webb Software Engineering Project Manager, Hill Air Force Base

SOFTWARE PRODUCT LINES IN ACTION

THE BEST INDUSTRIAL PRACTICE IN PRODUCT LINE ENGINEERING

Springer Science & Business Media Software product lines represent perhaps the most exciting paradigm shift in software development since the advent of high-level programming languages. Nowhere else in software engineering have we seen such breathtaking improvements in cost, quality, time to market, and developer productivity, often registering in the order-of-magnitude range. Here, the authors combine academic research results with real-world industrial experiences, thus presenting a broad view on product line engineering so that both managers and technical specialists will benefit from exposure to this work. They capture the wealth of knowledge that eight companies have gathered during the introduction of the software product line engineering approach in their daily practice.

CMMI AND SIX SIGMA

PARTNERS IN PROCESS IMPROVEMENT

Pearson Education "In this book, I have found answers to key questions and misconceptions about the relationship between Six Sigma and the Capability Maturity Model Integration [CMMI]....Among my key takeaways is that the relationship between Six Sigma and CMMI exemplifies one of the principles of S4/IEE: CMMI provides process infrastructure that is needed to support a successful Six Sigma strategy." —Forrest W. Breyfogle III, CEO, Smarter Solutions, Inc. "Finally, a book that bridges the software and hardware process tool set. To date, there have been hardware and software engineers who for one reason or another have not communicated their process methods. And so, myths formed that convinced the hardware community that CMMI was only for software and likewise convinced the software community that Six Sigma was only for hardware. It is both refreshing and thought provoking to dispel these myths." —Jack Ferguson, Manager, SEI Appraisal Program, Software Engineering Institute CMMI and Six Sigma represent two of the best-known process improvement initiatives. Both are designed to enhance work quality and thereby produce business advantages for an organization. It's a misconception that the two are in competition and cannot be implemented simultaneously. Practitioners originally trained in either CMMI or Six Sigma are now finding that the two initiatives work remarkably well together in the pursuit of their common goal. CMMI® and Six Sigma: Partners in Process Improvement focuses on the synergistic, rather than competitive, implementation of CMMI and Six Sigma—with synergy translating to "faster, better, cheaper" achievement of mission success. Topics range from formation of the value proposition to specific implementation tactics. The authors illustrate how not taking advantage of what both initiatives have to offer puts an organization at risk of sinking time, energy, and money into "inventing" a solution that already exists. Along the way they debunk a few myths about Six Sigma applications in software. While the authors concentrate on the interoperability of Six Sigma and CMMI, they also recognize that organizations rarely implement only these two initiatives. Accordingly, the discussion turns to the emerging realm of "multimodel" process improvement and strategies and tactics that transcend models to help organizations effectively knit together a single unified internal process standard. Whether you work in the defense industry, for a commercial organization, or for a government agency—wherever quality and efficiency matter—you'll find this book to be a valuable resource for bridging process issues across domains and building an improvement strategy that succeeds.

SOFTWARE SECURITY ENGINEERING

A GUIDE FOR PROJECT MANAGERS

Addison-Wesley Professional Shows project managers how to build security into their software products throughout the development lifecycle.

ESSENTIAL SOFTWARE ARCHITECTURE

Springer Science & Business Media Job titles like “Technical Architect” and “Chief Architect” nowadays abound in software industry, yet many people suspect that “architecture” is one of the most overused and least understood terms in professional software development. Gorton’s book tries to resolve this dilemma. It concisely describes the essential elements of knowledge and key skills required to be a software architect. The explanations encompass the essentials of architecture thinking, practices, and supporting technologies. They range from a general understanding of structure and quality attributes through technical issues like middleware components and service-oriented architectures to recent technologies like model-driven architecture, software product lines, aspect-oriented design, and the Semantic Web, which will presumably influence future software systems. This second edition contains new material covering enterprise architecture, agile development, enterprise service bus technologies, RESTful Web services, and a case study on how to use the MeDICi integration framework. All approaches are illustrated by an ongoing real-world example. So if you work as an architect or senior designer (or want to someday), or if you are a student in software engineering, here is a valuable and yet approachable knowledge source for you.

THE CAPABILITY MATURITY MODEL

GUIDELINES FOR IMPROVING THE SOFTWARE PROCESS

Addison-Wesley Professional Principal Contributors and Editors: Mark C. Paulk, Charles V. Weber, Bill Curtis, Mary Beth Chrissis "In every sense, the CMM represents the best thinking in the field today... this book is targeted at anyone involved in improving the software process, including members of assessment or evaluation teams, members of software engineering process groups, software managers, and software practitioners..." From the Foreword by Watts Humphrey The Capability Maturity Model for Software (CMM) is a framework that demonstrates the key elements of an effective software process. The CMM describes an evolutionary improvement path for software development from an ad hoc, immature process to a mature, disciplined process, in a path laid out in five levels. When using the CMM, software professionals in government and industry can develop and improve their ability to identify, adopt, and use sound management and technical practices for delivering quality software on schedule and at a reasonable cost. This book provides a description and technical overview of the CMM, along with guidelines for improving software process management overall. It is a sequel to Watts Humphrey's important work, *Managing the Software Process*, in that it structures the maturity framework presented in that book more formally. Features: Compares the CMM with ISO 9001 Provides an overview of ISO's SPICE project, which is developing international standards for software process improvement and capability determination Presents a case study of IBM Houston's Space Shuttle project, which is frequently referred to as being at Level 5 0201546647B04062001

INFORMATION SYSTEMS DEVELOPMENT

TOWARDS A SERVICE PROVISION SOCIETY

Springer Science & Business Media This volume constitutes the published proceedings of the 17th International Conference on Information Systems Development. They present the latest and greatest concepts, approaches, and techniques of systems development - a notoriously transitional field.

CMMI FOR OUTSOURCING

GUIDELINES FOR SOFTWARE, SYSTEMS, AND IT ACQUISITION

Addison-Wesley Professional This definitive introduction to CMMI-ACQ and its use in all phases of technology acquisition explains how CMMI-ACQ combines the SEIs unparalleled knowledge of software process improvement with new techniques developed for GMs \$16 billion technology acquisition program. The book reflects the unique insights of four SEI and GM experts who helped create CMMI-ACQ and implemented it for the first time.

AUTOMATED SOFTWARE TESTING

INTRODUCTION, MANAGEMENT, AND PERFORMANCE

Addison-Wesley Professional With the urgent demand for rapid turnaround on new software releases--without compromising quality--the testing element of software development must keep pace, requiring a major shift from slow, labor-intensive testing methods to a faster and more thorough automated testing approach. *Automated Software Testing* is a comprehensive, step-by-step guide to the

most effective tools, techniques, and methods for automated testing. Using numerous case studies of successful industry implementations, this book presents everything you need to know to successfully incorporate automated testing into the development process. In particular, this book focuses on the Automated Test Life Cycle Methodology (ATLM), a structured process for designing and executing testing that parallels the Rapid Application Development methodology commonly used today. Automated Software Testing is designed to lead you through each step of this structured program, from the initial decision to implement automated software testing through test planning, execution, and reporting. Included are test automation and test management guidance for: Acquiring management support Test tool evaluation and selection The automated testing introduction process Test effort and test team sizing Test team composition, recruiting, and management Test planning and preparation Test procedure development guidelines Automation reuse analysis and reuse library Best practices for test automation

ENTERPRISE INTEROPERABILITY III

NEW CHALLENGES AND INDUSTRIAL APPROACHES

Springer Science & Business Media *Interoperability: the ability of a system or a product to work with other systems or products without special effort from the user is a key issue in manufacturing and industrial enterprise generally. It is fundamental to the production of goods and services quickly and at low cost at the same time as maintaining levels of quality and customisation. Composed of over 50 papers, Enterprise Interoperability III ranges from academic research through case studies to industrial and administrative experience of interoperability. The international nature of the authorship continues to broaden. Many of the papers have examples and illustrations calculated to deepen understanding and generate new ideas. A concise reference to the state of the art in software interoperability, Enterprise Interoperability III will be of great value to engineers and computer scientists working in manufacturing and other process industries and to software engineers and electronic and manufacturing engineers working in the academic environment.*