

Download Free The Incremental Commitment Spiral Model Principles And Practices For Successful Systems And Software

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KEY=PRACTICES - DUNCAN PORTER

THE INCREMENTAL COMMITMENT SPIRAL MODEL

PRINCIPLES AND PRACTICES FOR SUCCESSFUL SYSTEMS AND SOFTWARE

Addison-Wesley Professional "The title makes a huge promise: a way to divide commitment into increments that are both meetable (good news for developers) and meaningful (good news for managers and stakeholders). And the book makes good on that promise." -Tom DeMarco, Principal, The Atlantic Systems Guild, author of Peopleware, Deadline, and Slack "I am seriously impressed with this ICSM book. Besides being conceptually sound, I was amazed by the sheer number of clear and concise characterizations of issues, relationships, and solutions. I wanted to take a yellow highlighter to it until I realized I'd be highlighting most of the book." -Curt Hibbs, Chief Agile Evangelist, Boeing Use the ICSM to Generate and Evolve Your Life-Cycle Process Assets to Best Fit Your Organization's Diverse and Changing Needs Many systems development practitioners find traditional "one-size-fits-all" processes inadequate for the growing complexity, diversity, dynamism, and assurance needs of their products and services. The Incremental Commitment Spiral Model (ICSM) responds with a principle- and risk-based framework for defining and evolving your project and corporate process assets, avoiding pitfalls and disruption, and leveraging opportunities to increase value. This book explains ICSM's framework of decision criteria and principles, and shows how to apply them through relevant examples. It demonstrates ICSM's potential for reducing rework and technical debt, improving maintainability, handling emergent requirements, and raising assurance levels. Its coverage includes What makes a system development successful ICSM's goals, principles, and usage as a process-generation framework Creating and evolving processes to match your risks and opportunities Integrating your current practices and adopting ICSM concepts incrementally, focusing on your greatest needs and opportunities About the Website: Download the evolving ICSM guidelines, subprocesses, templates, tools, white papers, and academic support resources at csse.usc.edu/ICSM.

THE INCREMENTAL COMMITMENT SPIRAL MODEL

PRINCIPLES AND PRACTICES FOR SUCCESSFUL SYSTEMS AND SOFTWARE

Pearson Education Many systems development practitioners find traditional "one-size-fits-all" processes inadequate for the growing complexity, diversity, dynamism, and assurance needs of their products and services. The Incremental Commitment Spiral Model (ICSM) responds with a principle- and risk-based framework for defining and evolving your project and corporate process assets. This book explains ICSM's framework of decision criteria and principles, and shows how to apply them through relevant examples.

THE INCREMENTAL COMMITMENT SPIRAL MODEL

PRINCIPLES AND PRACTICES FOR SUCCESSFUL SYSTEMS AND SOFTWARE

HUMAN-SYSTEM INTEGRATION IN THE SYSTEM DEVELOPMENT PROCESS

A NEW LOOK

National Academies Press In April 1991 BusinessWeek ran a cover story entitled, "Can't Work This Thing?" about the difficulties many people have with consumer products, such as cell phones and VCRs. More than 15 years later, the situation is much the same—but at a very different level of scale. The disconnect between people and technology has had society-wide consequences in the large-scale system accidents from major human error, such as those at Three Mile Island and in Chernobyl. To prevent both the individually annoying and nationally significant consequences, human capabilities and needs must be considered early and throughout system design and development. One challenge for such consideration has been providing the background and data needed for the seamless integration of humans into the design process from various perspectives: human factors engineering, manpower, personnel, training, safety and health, and, in the military, habitability and survivability. This collection of development activities has come to be called human-system integration (HSI). Human-System Integration in the System Development Process reviews in detail more than 20 categories of HSI methods to provide invaluable guidance and information for system designers and developers.

SYSTEM ENGINEERING ANALYSIS, DESIGN, AND DEVELOPMENT

CONCEPTS, PRINCIPLES, AND PRACTICES

John Wiley & Sons Praise for the first edition: "This excellent text will be useful to every system engineer (SE) regardless of the domain. It covers ALL relevant SE material and does so in a very clear, methodical fashion. The breadth and depth of the author's presentation of SE principles and practices is outstanding." -Philip Allen This textbook presents a comprehensive, step-by-step guide to System Engineering analysis, design, and development via an integrated set of concepts, principles, practices, and methodologies. The methods presented in this text apply to any type of human system -- small, medium, and large organizational systems and system development projects delivering engineered systems or services across multiple business sectors such as medical, transportation, financial, educational, governmental, aerospace and defense, utilities, political, and charity, among others. Provides a common focal point for "bridging the gap" between and unifying System Users, System Acquirers, multi-discipline System Engineering, and Project, Functional, and Executive Management education, knowledge, and decision-making for developing systems, products, or services Each chapter provides definitions of key terms, guiding principles, examples, author's notes, real-world examples, and exercises, which highlight and reinforce key SE&D concepts and practices Addresses concepts employed in Model-Based Systems Engineering (MBSE), Model-Driven Design (MDD), Unified Modeling Language (UMLTM) / Systems Modeling Language (SysMLTM), and Agile/Spiral/V-Model Development such as user needs, stories, and use cases analysis; specification development; system architecture development; User-Centric System Design (UCSD); interface definition & control; system integration & test; and Verification & Validation (V&V) Highlights/introduces a new 21st Century Systems Engineering & Development (SE&D) paradigm that is easy to understand and implement. Provides practices that are critical staging points for technical decision making such as Technical Strategy Development; Life Cycle requirements; Phases, Modes, & States; SE Process; Requirements Derivation; System Architecture Development, User-Centric System Design (UCSD); Engineering Standards, Coordinate Systems, and Conventions; et al. Thoroughly illustrated, with end-of-chapter exercises and numerous case studies and examples, Systems Engineering Analysis, Design, and Development, Second Edition is a primary textbook for multi-discipline, engineering, system analysis, and project management undergraduate/graduate level students and a valuable reference for professionals.

ARCHITECTING SYSTEMS

CONCEPTS, PRINCIPLES AND PRACTICE

FOUNDATIONS FOR DESIGNING USER-CENTERED SYSTEMS

WHAT SYSTEM DESIGNERS NEED TO KNOW ABOUT PEOPLE

Springer Science & Business Media Foundations for Designing User-Centered Systems introduces the fundamental human capabilities and characteristics that influence how people use interactive technologies. Organized into four main areas—anthropometrics, behaviour, cognition and social factors—it covers basic research and considers the practical implications of that research on system design. Applying what you learn from this book will help you to design interactive systems that are more usable, more useful and more effective. The authors have deliberately developed Foundations for Designing User-Centered Systems to appeal to system designers and developers, as well as to students who are taking courses in system design and HCI. The book reflects the authors' backgrounds in computer science, cognitive science, psychology and human factors. The material in the book is based on their collective experience which adds up to almost 90 years of working in academia and both with, and within, industry; covering domains that include aviation, consumer Internet, defense, eCommerce, enterprise system design, health care, and industrial process control.

SEMANTIC SOFTWARE DESIGN

A NEW THEORY AND PRACTICAL GUIDE FOR MODERN ARCHITECTS

O'Reilly Media With this practical book, architects, CTOs, and CIOs will learn a set of patterns for the practice of architecture, including analysis, documentation, and communication. Author Eben Hewitt shows you how to create holistic and thoughtful technology plans, communicate them clearly, lead people toward the vision, and become a great architect or Chief Architect. This book covers each key aspect of architecture comprehensively, including how to incorporate business architecture, information architecture, data architecture, application (software) architecture together to have the best chance for the system's success. Get a practical set of proven architecture practices focused on shipping great products using architecture Learn how architecture works effectively with development teams, management, and product management teams through the value chain Find updated special coverage on machine learning architecture Get usable templates to start incorporating into your teams immediately Incorporate business architecture, information architecture, data architecture, and application (software) architecture together

INTRODUCTION TO AGILE METHODS

Addison-Wesley Professional *A Thorough Introduction to the Agile Framework and Methodologies That Are Used Worldwide Organizations of all shapes and sizes are embracing Agile methodologies as a way to transform their products, customer satisfaction, and employee engagement. Many people with varying levels of work experience are interested in understanding the architecture and nuances of Agile, but it is difficult to know where to start. Numerous practitioner books are available, but there has never been a single source for unbiased information about Agile methodologies—until now. Introduction to Agile Methods is the place to start for students and professionals who want to understand Agile and become conversant with Agile values, principles, framework, and processes. Authors Sondra Ashmore and Kristin Runyan use academic research and their own experiences with numerous Agile implementations to present a clear description of the essential concepts. They address all key roles and the entire development life cycle, including common roadblocks that must be overcome to be successful. Through the authors' realistic use cases, practical examples, and thought-provoking interviews with pioneering practitioners, complex concepts are made relatable. No matter what your role or level of experience, this book provides a foundational understanding that can be used to start or enhance any Agile effort. Coverage includes How Agile compares with the Waterfall method and when to use each Why Agile demands a cultural transformation—and how that looks to each participant Comparing various Agile methodologies, including Scrum, Kanban, Extreme Programming (XP), Crystal, Feature Driven Development (FDD), Lean, and DSDM Understanding the roles within Agile and how they work together to create superior results Agile approaches to requirements gathering, planning, estimating, tracking, reporting, testing, quality, and integration Extending Agile beyond IT*

HOW LEARNING WORKS

SEVEN RESEARCH-BASED PRINCIPLES FOR SMART TEACHING

John Wiley & Sons *Praise for How Learning Works "How Learning Works is the perfect title for this excellent book. Drawing upon new research in psychology, education, and cognitive science, the authors have demystified a complex topic into clear explanations of seven powerful learning principles. Full of great ideas and practical suggestions, all based on solid research evidence, this book is essential reading for instructors at all levels who wish to improve their students' learning." —Barbara Gross Davis, assistant vice chancellor for educational development, University of California, Berkeley, and author, Tools for Teaching "This book is a must-read for every instructor, new or experienced. Although I have been teaching for almost thirty years, as I read this book I found myself resonating with many of its ideas, and I discovered new ways of thinking about teaching." —Eugenia T. Paulus, professor of chemistry, North Hennepin Community College, and 2008 U.S. Community Colleges Professor of the Year from The Carnegie Foundation for the Advancement of Teaching and the Council for Advancement and Support of Education "Thank you Carnegie Mellon for making accessible what has previously been inaccessible to those of us who are not learning scientists. Your focus on the essence of learning combined with concrete examples of the daily challenges of teaching and clear tactical strategies for faculty to consider is a welcome work. I will recommend this book to all my colleagues." —Catherine M. Casserly, senior partner, The Carnegie Foundation for the Advancement of Teaching "As you read about each of the seven basic learning principles in this book, you will find advice that is grounded in learning theory, based on research evidence, relevant to college teaching, and easy to understand. The authors have extensive knowledge and experience in applying the science of learning to college teaching, and they graciously share it with you in this organized and readable book." —From the Foreword by Richard E. Mayer, professor of psychology, University of California, Santa Barbara; coauthor, e-Learning and the Science of Instruction; and author, Multimedia Learning*

FUNDAMENTALS OF SOFTWARE ENGINEERING

PHI Learning Pvt. Ltd.

BALANCING AGILITY AND DISCIPLINE

A GUIDE FOR THE PERPLEXED

Addison-Wesley Professional *"Being a certified bibliophile and a professional geek, I have more shelf space devoted to books on software methods than any reasonable human should possess. Balancing Agility and Discipline has a prominent place in that section of my library, because it has helped me sort through the noise and smoke of the current method wars." --From the Foreword by Grady Booch "This is an outstanding book on an emotionally complicated topic. I applaud the authors for the care with which they have handled the subject." --From the Foreword by Alistair Cockburn "The authors have done a commendable job of identifying five critical factors--personnel, criticality, size, culture, and dynamism--for creating the right balance of flexibility and structure. Their thoughtful analysis will help developers who must sort through the agile-disciplined debate, giving them guidance to create the right mix for their projects." --From the Foreword by Arthur Pyster Agility and discipline: These apparently opposite attributes are, in fact, complementary values in software development. Plan-driven developers must also be agile; nimble developers must also be disciplined. The key to success is finding the right balance between the two, which will vary from project to project according to the circumstances and risks involved. Developers, pulled toward opposite ends by impassioned arguments, ultimately must learn how to give each value its due in their particular situations. Balancing Agility and Discipline sweeps aside the rhetoric, drills down to the operational core concepts, and presents a constructive approach to defining a balanced software development strategy. The authors expose the bureaucracy and stagnation that mark discipline without agility, and liken agility without discipline to unbridled and fruitless enthusiasm. Using a day in the life of two development teams and ground-breaking case studies, they illustrate the differences and similarities between agile and plan-driven methods, and show that the best development strategies have ways to combine both attributes. Their analysis is both objective and grounded, leading finally to clear and practical guidance for all software professionals--showing how to locate the sweet spot on the agility-discipline continuum for any given project. 0321186125B10212003*

PARALLEL AGILE - FASTER DELIVERY, FEWER DEFECTS, LOWER COST

Springer Nature *From the beginning of software time, people have wondered why it isn't possible to accelerate software projects by simply adding staff. This is sometimes known as the "nine women can't make a baby in one month" problem. The most famous treatise declaring this to be impossible is Fred Brooks' 1975 book The Mythical Man-Month, in which he declares that "adding more programmers to a late software project makes it later," and indeed this has proven largely true over the decades. Aided by a domain-driven code generator that quickly creates database and API code, Parallel Agile (PA) achieves significant schedule compression using parallelism: as many developers as necessary can independently and concurrently develop the scenarios from initial prototype through production code. Projects can scale by elastic staffing, rather than by stretching schedules for larger development efforts. Schedule compression with a large team of developers working in parallel is analogous to hardware acceleration of compute problems using parallel CPUs. PA has some similarities with and differences from other Agile approaches. Like most Agile methods, PA "gets to code early" and uses feedback from executable software to drive requirements and design. PA uses technical prototyping as a risk-mitigation strategy, to help sanity-check requirements for feasibility, and to evaluate different technical architectures and technologies. Unlike many Agile methods, PA does not support "design by refactoring," and it doesn't drive designs from unit tests. Instead, PA uses a minimalist UML-based design approach (Agile/ICONIX) that starts out with a domain model to facilitate communication across the development team, and partitions the system along use case boundaries, which enables parallel development. Parallel Agile is fully compatible with the Incremental Commitment Spiral Model (ICSM), which involves concurrent effort of a systems engineering team, a development team, and a test team working alongside the developers. The authors have been researching and refining the PA process for several years on multiple test projects that have involved over 200 developers. The book's example project details the design of one of these test projects, a crowdsourced traffic safety system.*

BEGINNING SOFTWARE ENGINEERING

John Wiley & Sons *A complete introduction to building robust and reliable software Beginning Software Engineering demystifies the software engineering methodologies and techniques that professional developers use to design and build robust, efficient, and consistently reliable software. Free of jargon and assuming no previous programming, development, or management experience, this accessible guide explains important concepts and techniques that can be applied to any programming language. Each chapter ends with exercises that let you test your understanding and help you elaborate on the chapter's main concepts. Everything you need to understand waterfall, Sashimi, agile, RAD, Scrum, Kanban, Extreme Programming, and many other development models is inside! Describes in plain English what software engineering is Explains the roles and responsibilities of team members working on a software engineering project Outlines key phases that any software engineering effort must handle to produce applications that are powerful and dependable Details the most popular software development methodologies and explains the different ways they handle critical development tasks Incorporates exercises that expand upon each chapter's main ideas Includes an extensive glossary of software engineering terms*

EVALUATION IN HEALTH PROMOTION

PRINCIPLES AND PERSPECTIVES

WHO Regional Office Europe *This book is the result of the WHO European Working Group on Health Promotion Evaluation which examined the current range of qualitative and quantitative evaluation methods to provide guidance to policy-makers and practitioners. It includes an extensive c*

HANDBOOK OF SOFTWARE ENGINEERING

Springer *This handbook provides a unique and in-depth survey of the current state-of-the-art in software engineering, covering its major topics, the conceptual genealogy of each subfield, and discussing future research directions. Subjects include foundational areas of software engineering (e.g. software processes, requirements engineering, software architecture, software testing, formal methods, software maintenance) as well as emerging areas (e.g., self-adaptive systems, software engineering in the cloud, coordination technology). Each chapter includes an introduction to central concepts and principles, a guided tour of seminal papers and key contributions, and promising future research directions. The authors of the individual chapters are all acknowledged experts in their field and include many who have pioneered the techniques and technologies discussed. Readers will find an authoritative and concise review of each subject, and will also learn how software engineering technologies have evolved and are likely to develop in the years to come. This book will be especially useful for researchers who are new to software engineering, and for practitioners seeking to enhance their skills and knowledge.*

SOFTWARE TESTING AND ANALYSIS

PROCESS, PRINCIPLES AND TECHNIQUES

John Wiley & Sons Incorporated *Teaches readers how to test and analyze software to achieve an acceptable level of quality at an acceptable cost Readers will be able to minimize software failures, increase quality, and effectively manage costs Covers techniques that are suitable for near-term application, with sufficient technical background to indicate how and when to apply them Provides balanced coverage of software testing & analysis approaches By incorporating modern topics and strategies, this book will be the standard software-testing textbook*

SYSTEM SOFTWARE

AN INTRODUCTION TO SYSTEMS PROGRAMMING

Addison Wesley Publishing Company This text is an introduction to the design and implementation of various types of system software. A central theme of the book is the relationship between machine architecture and system software.

CHEMICAL ENGINEERING DESIGN

PRINCIPLES, PRACTICE AND ECONOMICS OF PLANT AND PROCESS DESIGN

Elsevier *Chemical Engineering Design, Second Edition*, deals with the application of chemical engineering principles to the design of chemical processes and equipment. Revised throughout, this edition has been specifically developed for the U.S. market. It provides the latest US codes and standards, including API, ASME and ISA design codes and ANSI standards. It contains new discussions of conceptual plant design, flowsheet development, and revamp design; extended coverage of capital cost estimation, process costing, and economics; and new chapters on equipment selection, reactor design, and solids handling processes. A rigorous pedagogy assists learning, with detailed worked examples, end of chapter exercises, plus supporting data, and Excel spreadsheet calculations, plus over 150 Patent References for downloading from the companion website. Extensive instructor resources, including 1170 lecture slides and a fully worked solutions manual are available to adopting instructors. This text is designed for chemical and biochemical engineering students (senior undergraduate year, plus appropriate for capstone design courses where taken, plus graduates) and lecturers/tutors, and professionals in industry (chemical process, biochemical, pharmaceutical, petrochemical sectors). New to this edition: Revised organization into Part I: Process Design, and Part II: Plant Design. The broad themes of Part I are flowsheet development, economic analysis, safety and environmental impact and optimization. Part II contains chapters on equipment design and selection that can be used as supplements to a lecture course or as essential references for students or practicing engineers working on design projects. New discussion of conceptual plant design, flowsheet development and revamp design Significantly increased coverage of capital cost estimation, process costing and economics New chapters on equipment selection, reactor design and solids handling processes New sections on fermentation, adsorption, membrane separations, ion exchange and chromatography Increased coverage of batch processing, food, pharmaceutical and biological processes All equipment chapters in Part II revised and updated with current information Updated throughout for latest US codes and standards, including API, ASME and ISA design codes and ANSI standards Additional worked examples and homework problems The most complete and up to date coverage of equipment selection 108 realistic commercial design projects from diverse industries A rigorous pedagogy assists learning, with detailed worked examples, end of chapter exercises, plus supporting data and Excel spreadsheet calculations plus over 150 Patent References, for downloading from the companion website Extensive instructor resources: 1170 lecture slides plus fully worked solutions manual available to adopting instructors

LEAN SOFTWARE DEVELOPMENT

AN AGILE TOOLKIT: AN AGILE TOOLKIT

Addison-Wesley *Lean Software Development: An Agile Toolkit* Adapting agile practices to your development organization Uncovering and eradicating waste throughout the software development lifecycle Practical techniques for every development manager, project manager, and technical leader *Lean software development: applying agile principles to your organization* In *Lean Software Development*, Mary and Tom Poppendieck identify seven fundamental "lean" principles, adapt them for the world of software development, and show how they can serve as the foundation for agile development approaches that work. Along the way, they introduce 22 "thinking tools" that can help you customize the right agile practices for any environment. Better, cheaper, faster software development. You can have all three—if you adopt the same lean principles that have already revolutionized manufacturing, logistics and product development. Iterating towards excellence: software development as an exercise in discovery Managing uncertainty: "decide as late as possible" by building change into the system. Compressing the value stream: rapid development, feedback, and improvement Empowering teams and individuals without compromising coordination Software with integrity: promoting coherence, usability, fitness, maintainability, and adaptability How to "see the whole"—even when your developers are scattered across multiple locations and contractors Simply put, *Lean Software Development* helps you refocus development on value, flow, and people—so you can achieve breakthrough quality, savings, speed, and business alignment.

ALGORITHMS IN ACTION

Algorithms in Action effectively introduces students to a variety of techniques for designing algorithms with a focus on developing intuitive understanding. Readers learn how to successfully construct foundational algorithms, preparing them for more advanced courses in the discipline, as well as professional application. Over the course of nine chapters, students learn fundamental concepts critical to the development of algorithms, paired with detailed visual repres

SYSTEMS ENGINEERING: PRINCIPLES AND PRACTICE

This book is based on class notes for a course in the MS program in Systems Engineering at Johns Hopkins University. The program was a cooperative effort between senior systems engineers from the Johns Hopkins University Applied Physics Laboratory and the Westinghouse Electric Company. The authors were part of the curriculum design team as well as members of the faculty.

STRENGTHENING FORENSIC SCIENCE IN THE UNITED STATES

A PATH FORWARD

National Academies Press Scores of talented and dedicated people serve the forensic science community, performing vitally important work. However, they are often constrained by lack of adequate resources, sound policies, and national support. It is clear that change and advancements, both systematic and scientific, are needed in a number of forensic science disciplines to ensure the reliability of work, establish enforceable standards, and promote best practices with consistent application. *Strengthening Forensic Science in the United States: A Path Forward* provides a detailed plan for addressing these needs and suggests the creation of a new government entity, the National Institute of Forensic Science, to establish and enforce standards within the forensic science community. The benefits of improving and regulating the forensic science disciplines are clear: assisting law enforcement officials, enhancing homeland security, and reducing the risk of wrongful conviction and exonerated. *Strengthening Forensic Science in the United States* gives a full account of what is needed to advance the forensic science disciplines, including upgrading of systems and organizational structures, better training, widespread adoption of uniform and enforceable best practices, and mandatory certification and accreditation programs. While this book provides an essential call-to-action for congress and policy makers, it also serves as a vital tool for law enforcement agencies, criminal prosecutors and attorneys, and forensic science educators.

SPIRAL DEVELOPMENT

EXPERIENCE, PRINCIPLES, AND REFINEMENTS

Abstract: "Spiral development is a family of software development processes characterized by repeatedly iterating a set of elemental development processes and managing risk so it is actively being reduced. This paper characterizes spiral development by enumerating a few 'invariant' properties that any such process must exhibit. For each, a set of 'variants' is also presented, demonstrating a range of process definitions in the spiral development family. Each invariant excludes one or more 'hazardous spiral look-alike' models, which are also outlined. This report also shows how the spiral model can be used for a more cost-effective incremental commitment of funds, via an analogy of the spiral model to stud poker. An important and relatively recent innovation to the spiral model has been the introduction of anchor point milestones. The latter part of the paper describes and discusses these."

THE ART OF LEARNING

AN INNER JOURNEY TO OPTIMAL PERFORMANCE

Simon and Schuster An eight-time national chess champion and world champion martial artist shares the lessons he has learned from two very different competitive arenas, identifying key principles about learning and performance that readers can apply to their life goals. Reprint. 35,000 first printing.

PERFORMANCE-BASED PROJECT MANAGEMENT

INCREASING THE PROBABILITY OF PROJECT SUCCESS

AMACOM Even the most experienced project managers aren't immune to the more common and destructive reasons for project collapses. Poor time and budget performance, failure to deal with complexity, uncontrolled changes in scope . . . they can catch anyone off guard. *Performance-Based Project Management* can help radically improve your project's success rate, despite these and other obstacles that will try to take it down. Readers will discover how they can increase the probability of project success, detailing a step-by-step plan for avoiding surprises, forecasting performance, identifying risk, and taking corrective action to keep a project a success. Project leaders wishing to stand out among their peers who are continually hampered by these unexpected failures will learn how to:

- Assess the business capabilities needed for a project
- Plan and schedule the work
- Determine the resources required to complete on time and on budget
- Identify and manage risks to success
- Measure performance in units meaningful to decision makers

By connecting mission strategy with project execution, this invaluable resource for project managers in every industry will help bring projects to successful, career-enhancing completion.

PROJECT MANAGEMENT FOR INFORMATION SYSTEMS

Pearson Education The fourth edition of this text addresses the issue of organizational culture in more detail and gives an analysis of why information system projects fail and what can be done to make success more likely.

ARTIFICIAL INTELLIGENCE AND SOFTWARE ENGINEERING

Routledge First published in 1998. Routledge is an imprint of Taylor & Francis, an informa company.

ACTION RESEARCH

PRINCIPLES AND PRACTICE

Routledge Since the first edition of this established text was published in 1988, action research has gained ground as a popular method amongst educational researchers, and in particular for practising teachers doing higher-level courses. In this new edition Jean McNiff provides updates on methodological discussions and includes new sections of case study material and information on supporting action research. The book raises issues about how action research is theorised, whether it is seen as a spectator discipline or as a real life practice, and how practitioners position themselves within the debate. It discusses the importance for educators of understanding their own work and showing how their educative influence can lead to the development of good orders in formal and informal learning settings and in the wider community. This second edition comes at a time when, after years of debate over what counts as action research, it is now considered an acceptable and useful part of mainstream research practice.

SOFTWARE PROJECT MANAGEMENT

A UNIFIED FRAMEWORK

Addison-Wesley Professional Software Project Management explains the latest management strategies and techniques in software developments. It covers such issues as keeping the team motivated, cost-justifying strategies, deadlines and budgets.

GOOD TO GREAT

WHY SOME COMPANIES MAKE THE LEAP ... AND OTHERS DON'T

Random House Can a good company become a great one and, if so, how? After a five-year research project, Collins concludes that good to great can and does happen. In this book, he uncovers the underlying variables that enable any type of organization to

SOFTWARE DESIGN METHODOLOGY

FROM PRINCIPLES TO ARCHITECTURAL STYLES

Elsevier Software Design Methodology explores the theory of software architecture, with particular emphasis on general design principles rather than specific methods. This book provides in depth coverage of large scale software systems and the handling of their design problems. It will help students gain an understanding of the general theory of design methodology, and especially in analysing and evaluating software architectural designs, through the use of case studies and examples, whilst broadening their knowledge of large-scale software systems. This book shows how important factors, such as globalisation, modelling, coding, testing and maintenance, need to be addressed when creating a modern information system. Each chapter contains expected learning outcomes, a summary of key points and exercise questions to test knowledge and skills. Topics range from the basic concepts of design to software design quality; design strategies and processes; and software architectural styles. Theory and practice are reinforced with many worked examples and exercises, plus case studies on extraction of keyword vector from text; design space for user interface architecture; and document editor. Software Design Methodology is intended for IT industry professionals as well as software engineering and computer science undergraduates and graduates on Msc conversion courses. * In depth coverage of large scale software systems and the handling of their design problems * Many worked examples, exercises and case studies to reinforce theory and practice * Gain an understanding of the general theory of design methodology

SOFTWARE MODELING AND DESIGN

UML, USE CASES, PATTERNS, AND SOFTWARE ARCHITECTURES

Cambridge University Press This book covers all you need to know to model and design software applications from use cases to software architectures in UML and shows how to apply the COMET UML-based modeling and design method to real-world problems. The author describes architectural patterns for various architectures, such as broker, discovery, and transaction patterns for service-oriented architectures, and addresses software quality attributes including maintainability, modifiability, testability, traceability, scalability, reusability, performance, availability, and security. Complete case studies illustrate design issues for different software architectures: a banking system for client/server architecture, an online shopping system for service-oriented architecture, an emergency monitoring system for component-based software architecture, and an automated guided vehicle for real-time software architecture. Organized as an introduction followed by several short, self-contained chapters, the book is perfect for senior undergraduate or graduate courses in software engineering and design, and for experienced software engineers wanting a quick reference at each stage of the analysis, design, and development of large-scale software systems.

AGILE SOFTWARE DEVELOPMENT

PRINCIPLES, PATTERNS, AND PRACTICES

Pearson Education This comprehensive, pragmatic tutorial on Agile Development and eXtreme programming, written by one of the founding fathers of Agile Development: Teaches software developers and project managers how to get projects done on time, and on budget using the power of Agile Development; Uses real-world case studies to show how to plan, test, refactor, and pair program using eXtreme programming; Contains a wealth of reusable C++ and Java code; Focuses on solving customer oriented systems problems using UML and Design Patterns.

BUILDING BETTER INTERFACES FOR REMOTE AUTONOMOUS SYSTEMS

AN INTRODUCTION FOR SYSTEMS ENGINEERS

Springer Nature This 'Open Access' SpringerBrief provides foundational knowledge for designing autonomous, asynchronous systems and explains aspects of users relevant to designing for these systems, introduces principles for user-centered design, and prepares readers for more advanced and specific readings. It provides context and the implications for design choices made during the design and development of the complex systems that are part of operation centers. As such, each chapter includes principles to summarize the design implication that engineers can use to inform their own design of interfaces for operation centers and similar systems. It includes example materials for the design of a fictitious system, which are referenced in the book and can be duplicated and extended for real systems. The design materials include a system overview, the system architecture, an example scenario, a stakeholder analysis, a task analysis, a description of the system and interface technology, and contextualized design guidelines. The guidelines can be specified because the user, the task, and the technology are well specified as an example. Building Better Interfaces for Remote Autonomous Systems is for working system engineers who are designing interfaces used in high throughput, high stake, operation centers (op centers) or control rooms, such as network operation centers (NOCs). Intended users will have a technical undergraduate degree (e.g., computer science) with little or no training in design, human sciences, or with human-centered iterative design methods and practices. Background research for the book was supplemented by interaction with the intended audience through a related project with L3Harris Technologies (formerly Harris Corporation).

AGILE FOUNDATIONS

PRINCIPLES, PRACTICES AND FRAMEWORKS

BCS, The Chartered Institute for IT "Agile practices transform the way organisations carry out business and respond to change. But to realise success, an agile mindset needs to be adopted throughout an organisation, not just within the IT team. This book is aimed at those working in an agile environment or wanting to understand agile practices. Giving a comprehensive introduction to agile principles and methodologies, it will enable readers to apply core values and principles of agile methods in their organisation. This is the official textbook for the BCS Agile Foundation certificate." --

USER STORIES APPLIED

FOR AGILE SOFTWARE DEVELOPMENT

Addison-Wesley Professional Thoroughly reviewed and eagerly anticipated by the agile community, User Stories Applied offers a requirements process that saves time, eliminates rework, and leads directly to better software. The best way to build software that meets users' needs is to begin with "user stories": simple, clear, brief descriptions of functionality that will be valuable to real users. In User Stories Applied, Mike Cohn provides you with a front-to-back blueprint for writing these user stories and weaving them into your development lifecycle. You'll learn what makes a great user story, and what makes a bad one. You'll discover practical ways to gather user stories, even when you can't speak with your users. Then, once you've compiled your user stories, Cohn shows how to organize them, prioritize them, and use them for planning, management, and testing. User role modeling: understanding what users have in common, and where they differ Gathering stories: user interviewing, questionnaires, observation, and workshops Working with managers, trainers, salespeople and other "proxies" Writing user stories for acceptance testing Using stories to prioritize, set schedules, and estimate release costs Includes end-of-chapter practice questions and exercises User Stories Applied will be invaluable to every software developer, tester, analyst, and manager working with any agile method: XP, Scrum... or even your own home-grown approach.

MITRE SYSTEMS ENGINEERING GUIDE

THE REQUIREMENTS ENGINEERING HANDBOOK

Artech House Gathering customer requirements is a key activity for developing software that meets the customer's needs. A concise and practical overview of everything a requirement's analyst needs to know about establishing customer requirements, this first-of-its-kind book is the perfect desk guide for systems or software development work. The book enables professionals to identify the real customer requirements for their projects and control changes and additions to these requirements. This unique resource helps practitioners understand the importance of requirements, leverage effective requirements practices, and better utilize resources. The book also explains how to strengthen interpersonal relationships and communications which are major contributors to project effectiveness.

Moreover, analysts find clear examples and checklists to help them implement best practices.

SOFTWARE PROCESS IMPROVEMENT

16TH EUROPEAN CONFERENCE, EUROSPI 2009, ALCALA (MADRID), SPAIN, SEPTEMBER 2-4, 2009, PROCEEDINGS

Springer Science & Business Media This textbook is intended for SPI (software process improvement) managers and - searchers, quality managers, and experienced project and research managers. The papers constitute the research proceedings of the 16th EuroSPI (European Software Process Improvement, www.eurospi.net) conference held in Alcala (Madrid region), September 2-4, 2009, Spain. Conferences have been held since 1994 in Dublin, 1995 in Vienna (Austria), 1997 in Budapest (Hungary), 1998 in Gothenburg (Sweden), 1999 in Pori (Finland), 2000 in Copenhagen (Denmark), 2001 in Limerick (Ireland), 2002 in Nuremberg (Germany), 2003 in Graz (Austria), 2004 in Trondheim (Norway), 2005 in Budapest (Hungary), 2006 in Joensuu (Finland), 2007 in Potsdam (Germany), 2008 in Dublin (Ireland), and 2009 in Alcala (Spain). EuroSPI established an experience library (library.eurospi.net) which will be continuously extended over the next few years and will be made available to all attendees. EuroSPI also created an umbrella initiative for establishing a European Qualification Network in which different SPINs and national initiatives join mutually beneficial collaborations (ECQA - European Certification and Qualification Association, www.ecqa.org). With a general assembly during October 15-16, 2007 through Euro-SPI partners and networks, in collaboration with the European Union (supported by the EU Leonardo da Vinci Programme) a European certification association has been created (www.eu-certificates.org, www.ecqa.org) for the IT and services sector to offer SPI knowledge and certificates to industry, establishing close knowledge transfer links between research and industry.