

Integrating Cmmi And Agile Development Case Studies And Proven Techniques For Faster Performance Improvement Sei Series In Software Engineering

This book offers a selection of papers from the 2016 International Conference on Software Process Improvement (CIMPS'16), held between the 12th and 14th of October 2016 in Aguascalientes, Aguascalientes, México. The CIMPS'16 is a global forum for researchers and practitioners to present and discuss the most recent innovations, trends, results, experiences and concerns in the different aspects of software engineering with a focus on, but not limited to, software processes, security in information and communication technology, and big data. The main topics covered include: organizational models, standards and methodologies, knowledge management, software systems, applications and tools, information and communication technologies and processes in non-software domains (mining, automotive, aerospace, business, health care, manufacturing, etc.) with a clear focus on software process challenges.

It was our intention to organize IAIT 2010 as the place where researchers and industrial practitioners could share their work and achievements in information technology, both theoretical and in application. This is the fourth time we have organized IAIT to serve as a venue to foster collaboration among industry and academia from different parts of the world. A lot has been achieved since the launch of the first IAIT in 2005; however, many challenges remain to be addressed in the years to come. IAIT 2010 drew attendance from leading professionals in both industry and academes, as in IAIT 2009. In addition to the relevant program offered by IAIT 2010, the conference provided an excellent environment to meet peers in the IT profession, build relationships, and exchange lessons learned. During the conference, participants presented and discussed the latest topics in information technology, ranging from technical knowledge and experimentation to future strategic directions. As the Internet continues to reach out even further, almost everything in our daily life is accessible via IP addresses, our societies need to recognize that we need new knowledge to make this advancement become a benefit to all life in this world. It is almost impossible to gain this new knowledge without contributions from our colleagues, working in various aspects of information technology. Some times, new knowledge found in one area can help simplify difficult task in another. Together we can make our world better by creating applications from information technology.

There is a growing interaction between companies and countries, illustrated by a constant flow of trade, capital, and work. With the rapid emergence of other countries with sufficient potential to join the globalization process, it is necessary to provide techniques for managerial planning, organization, and control in an international context. Managerial Competencies for Multinational Businesses is a

collection of innovative research on the methods of leadership styles and skills required for managers to be successful in an international company. Highlighting a range of topics, including human resource management, industrial relations, and international careers, this book is ideally designed for senior managers, business professionals, team leaders, and human resource managers seeking current research on the key aspects of managing a company in a developing globalized market.

This book constitutes the refereed proceedings of the 12 International Conference on Product-Focused Software Process Improvement, PROFES 2011, held in Torre Canne, Italy, in June 2011. The 24 revised full papers presented together with the abstracts of 2 keynote addresses were carefully reviewed and selected from 54 submissions. The papers are organized in topical sections on agile and lean practices, cross-model quality improvement, global and competitive software development, managing diversity, product and process measurements, product-focused software process improvement, requirement process improvement, and software process improvement.

Today, technology has become too much a part of overall corporate success for its effectiveness to be left to chance. The stakes are too high. Fortunately, the idea of 'quality management' is being reinvigorated. In the last decade process programs have become more and more prevalent. And, out of all the available options, three have moved to the top of the chain. These three are: The 9001:2000 Quality Management Standard from the International Standards Organization; The Capability Maturity Model Integration from the Software Engineering Institute; and Six Sigma, a methodology for improvement shaped by companies such as Motorola, Honeywell, and General Electric. These recognized and proven quality programs are rising in popularity as more technology managers are looking for ways to help remove degrees of risk and uncertainty from their business equations, and to introduce methods of predictability that better ensure success. Process Improvement Essentials combines the foundation needed to understand process improvement theory with the best practices to help individuals implement process improvement initiatives in their organization. The three leading programs: ISO 9001:2000, CMMI, and Six Sigma--amidst the buzz and hype--tend to get lumped together under a common label. This book delivers a combined guide to all three programs, compares their applicability, and then sets the foundation for further exploration. It's a one-stop-shop designed to give you a working orientation to what the field is all about. Companies in highly regulated industries face unique challenges in optimizing business performance and profitability while maintaining strong governance and strict regulatory adherence. In High Performance Operations, leading business performance consultant Hillel Glazer shows how to achieve these goals through the successful integration of lean- and systems thinking. Writing for a broad audience of operations and governance executives, Glazer shows how to systematically incorporate compliance into planning for overall performance,

value, and profitability, rather than viewing compliance practices as an end in itself. Glazer helps you discover and implement the pre-conditions for success! uncover the secret sauce that helps you scale their successes, eliminate single points of failure, and get more of what went right! define what value and operational excellence look like in your company, and identify the costs you'll have to pay to achieve them! create solutions, establish proof-of-performance, justify investments, measure performance, and implement continuous improvement! translate solutions into working policies, patterns, processes, and procedures. Using this book's proven techniques, you can build your company into the best place to work, the best value to your customers and the best source of return to your stakeholders. An indispensable resource for all operations managers, compliance teams, process control managers, and other decision-makers in regulated industries such as healthcare, pharmaceuticals, manufacturing, IT, finance, and environmental services.

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.

Software engineering has advanced rapidly in recent years in parallel with the complexity and scale of software systems. New requirements in software systems yield innovative approaches that are developed either through introducing new paradigms or extending the capabilities of well-established approaches. Modern Software Engineering Concepts and Practices: Advanced Approaches provides emerging theoretical approaches and their practices. This book includes case studies and real-world practices and presents a range of advanced approaches to reflect various perspectives in the discipline.

Abstract: "Agile development methods and CMMI (Capability Maturity Model Integration) best practices are often perceived to be at odds with each other. This report clarifies why the discord need not exist and proposes that CMMI and Agile champions work toward deriving benefit from using both and exploit synergies that have the potential to dramatically improve business performance."

Virtual Project Management: Software Solutions for Today and the Future explores the technical management issues involved in the revolutionary new way of building complex software intensive systems faster and cheaper by employing the power of distributed operations. The book examines the implementation issues that cut deep inside present day collocated engineering organizations and recommends practical and affordable actions to aid organizations seeking increased productivity through distributed operations. The demand for integrated solutions constructed from a combination of existing and newly developed software increases daily. Many organizations find themselves with shortages of the critical skills necessary to compete in many of these newly created markets. Employing virtual collaborative development provides a dramatic increase in a company's opportunities to successfully compete. Virtual collaboration provides a broader skill and product knowledge base coupled with a deeper pool of personnel to potentially employ. It removes two of the major barriers - company affiliation and physical location. Virtual Project Management: Software Solutions for Today and the Future focuses on critical characteristics underlying how work actually gets done in traditional collocated engineering environments. It examines the changes taking place on virtual projects through a series of anecdotes based on real project experiences. The book provides an 8 step practical and affordable plan that can be used as a framework in either setting up and executing a new virtual project, or in instituting improvements to a project that has drifted off course. Others have lived through the pain of learning lessons the hard way. You don't need to follow their path. The insights and solutions offered by Paul McMahon answer the questions virtual project leaders will be asking well into the 21st century.

This volume presents the second part of the proceedings of the Mediterranean Conference on Information & Communication Technologies (MedICT 2015), which was held at Saidia, Morocco during 7–9 May, 2015. MedICT provides an excellent international forum to the researchers and practitioners from both academia as well as industry to meet and share cutting-edge development. The conference has also a special focus on enabling technologies for societal challenges, and seeks to address multidisciplinary challenges in Information & Communication Technologies such as health, demographic change, wellbeing, security and sustainability issues. The proceedings publish high quality papers which are closely related to the various theories, as well as emerging and practical applications of particular interest to the ICT community. This second volume provides a compact yet broad view of recent developments in Data, Systems, Services and Education, and covers recent research areas in the field including Control Systems, Software Engineering, Data Mining and Big Data, ICT for Education and Support Activities, Networking, Cloud Computing and Security, ICT Based Services and Applications, Mobile Agent Systems, Software Engineering, Data Mining and Big Data, Online Experimentation & Artificial Intelligence in Education, Networking, Cloud

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Computing and Security, ICT Based Education and Services ICT Challenges and Applications, Advances in ICT Modeling and Design ICT Developments.

Accelerating Process Improvement Using Agile Techniques explains how agile programming is applied to standard process improvement. By applying agile techniques, IT organizations can speed up process improvement initiatives, minimize the resources these initiatives require, and maximize the benefits of process improvement. The book details step-by-step how to implement the Accelerating Process Improvement Methodology (APIM) and how to integrate APIM with various standard process improvement models and methodologies, including the ISO 9000 series, SPICE, TQM, SPIRE, PMBOK, and CMM/CMMI. Agile process improvement enables organizations to rapidly set strategic goals, meet a greater percentage of user requirements, and realize a quicker return on investment. About the Author Deb Jacobs is a Professional Consultant with Focal Point Associates specializing in process improvement and project management. She currently provides support to organizations in training, process improvement consulting, project management consulting, software engineering consulting, and proposal development. Ms. Jacobs has over 25 year's in project management, process improvement management, system/software engineering, and proposal development with a BS in Computer Science.

SEMAT (Software Engineering Methods and Theory) is an international initiative designed to identify a common ground, or universal standard, for software engineering. It is supported by some of the most distinguished contributors to the field. Creating a simple language to describe methods and practices, the SEMAT team expresses this common ground as a kernel—or framework—of elements essential to all software development. The Essence of Software Engineering introduces this kernel and shows how to apply it when developing software and improving a team's way of working. It is a book for software professionals, not methodologists. Its usefulness to development team members, who need to evaluate and choose the best practices for their work, goes well beyond the description or application of any single method. "Software is both a craft and a science, both a work of passion and a work of principle. Writing good software requires both wild flights of imagination and creativity, as well as the hard reality of engineering tradeoffs. This book is an attempt at describing that balance." —Robert Martin (unclebob) "The work of Ivar Jacobson and his colleagues, started as part of the SEMAT initiative, has taken a systematic approach to identifying a 'kernel' of software engineering principles and practices that have stood the test of time and recognition." —Bertrand Meyer "The software development industry needs and demands a core kernel and language for defining software development practices—practices that can be mixed and matched, brought on board from other organizations; practices that can be measured; practices that can be integrated; and practices that can be compared and contrasted for speed, quality, and price. This thoughtful book gives a good grounding in ways to think about the problem, and a language to address the need, and every software engineer should read it." —Richard Soley

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 Provides recommendations and case studies to help with the implementation of Scrum. 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

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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

Updated revision of the best selling book on CMMI – now covering version 1.2.

Looks at a successful software project and provides details for software development for clients using object-oriented design and programming.

Software is one of the most important products in human history and is widely used by all industries and all countries. It is also one of the most expensive and labor-intensive products in human history. Software also has very poor quality that has caused many major disasters and wasted many millions of dollars. Software is also the target of frequent and increasingly serious cyber-attacks. Among the reasons for these software problems is a chronic lack of reliable quantified data. This reference provides quantified data from many countries and many industries based on about 26,000 projects developed using a variety of methodologies and team experience levels. The data has been gathered between 1970 and 2017, so interesting historical trends are available. Since current average software productivity and quality results are suboptimal, this book focuses on "best in class" results and shows not only quantified quality and productivity data from best-in-class organizations, but also the technology stacks used to achieve best-in-class results. The overall goal of this book is to encourage the adoption of best-in-class software metrics and best-in-class technology stacks. It does so by providing current data on average software schedules, effort, costs, and quality for several industries and countries. Because productivity and quality vary by technology and size, the book presents quantitative results for applications between 100 function points and 100,000 function points. It shows quality results using defect potential and DRE metrics because the number one cost driver for software is finding and fixing bugs. The book presents data on cost of quality for software projects and discusses technical debt, but that metric is not standardized. Finally, the book includes some data on three years of software maintenance and enhancements as well as some data on total cost of ownership.

The Data Vault was invented by Dan Linstedt at the U.S. Department of Defense, and the standard has been successfully applied to data warehousing projects at

organizations of different sizes, from small to large-size corporations. Due to its simplified design, which is adapted from nature, the Data Vault 2.0 standard helps prevent typical data warehousing failures. "Building a Scalable Data Warehouse" covers everything one needs to know to create a scalable data warehouse end to end, including a presentation of the Data Vault modeling technique, which provides the foundations to create a technical data warehouse layer. The book discusses how to build the data warehouse incrementally using the agile Data Vault 2.0 methodology. In addition, readers will learn how to create the input layer (the stage layer) and the presentation layer (data mart) of the Data Vault 2.0 architecture including implementation best practices. Drawing upon years of practical experience and using numerous examples and an easy to understand framework, Dan Linstedt and Michael Olschimke discuss: How to load each layer using SQL Server Integration Services (SSIS), including automation of the Data Vault loading processes. Important data warehouse technologies and practices. Data Quality Services (DQS) and Master Data Services (MDS) in the context of the Data Vault architecture. Provides a complete introduction to data warehousing, applications, and the business context so readers can get-up and running fast Explains theoretical concepts and provides hands-on instruction on how to build and implement a data warehouse Demystifies data vault modeling with beginning, intermediate, and advanced techniques Discusses the advantages of the data vault approach over other techniques, also including the latest updates to Data Vault 2.0 and multiple improvements to Data Vault 1.0

Real Process Improvement Using the CMMI presents readers with non-academic, real-world approaches to process improvement via CMMI. The author provides concepts and techniques for CMMI-based process improvement which are as effective as they are innovative. Professionals at all levels from system engineers to CEOs will find a weal

This book constitutes the refereed post-conference proceedings of the Second International Conference on Cyber Security and Computer Science, ICONCS 2020, held in Dhaka, Bangladesh, in February 2020. The 58 full papers were carefully reviewed and selected from 133 submissions. The papers detail new ideas, inventions, and application experiences to cyber security systems. They are organized in topical sections on optimization problems; image steganography and risk analysis on web applications; machine learning in disease diagnosis and monitoring; computer vision and image processing in health care; text and speech processing; machine learning in health care; blockchain applications; computer vision and image processing in health care; malware analysis; computer vision; future technology applications; computer networks; machine learning on imbalanced data; computer security; Bangla language processing.

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.

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.

This volume constitutes the refereed proceedings of the 18th International Conference on Software Process Improvement and Capability Determination, SPICE 2018, held in Tessaaloniki, Greece, in October 2018. The 26 full papers presented were carefully reviewed and selected from 40 submissions. The papers are organized in the following topical sections: SPI systematic literature reviews; SPI and assessment; SPI methods and reference models; SPI education and management issues; SPI knowledge and change processes; SPI compliance and configuration; SPI and agile; industry short papers.

This book constitutes the refereed proceedings of the 13th International Conference on

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Software Process Improvement and Capability Determination, SPICE 2013, held in Bremen, Germany, in June 2013. The 21 revised full papers presented and 7 short papers were carefully reviewed and selected from numerous submissions. The papers are organized in topical sections on process quality; medical device software processes; design and use of process models; studies of software development; agile development; IT service management; assessment for diagnosis.

The book describes how to manage and successfully deliver large, complex, and expensive systems that can be composed of millions of line of software code, being developed by numerous groups throughout the globe, that interface with many hardware items being developed by geographically dispersed companies, where the system also includes people, policies, constraints, regulations, and a myriad of other factors. It focuses on how to seamlessly integrate systems, satisfy the customer's requirements, and deliver within the budget and on time. The guide is essentially a "shopping list" of all the activities that could be conducted with tailoring guidelines to meet the needs of each project.

"This book will be a great help to a variety of organizations figuring out how best to implement CMMI, including large and small enterprises, even if their starting point is not 'Agile.' All-in-all, this contains 'pearls of wisdom' that will make a much-appreciated contribution to the software engineering community." Mike Konrad Chief Architect, CMMI, Software Engineering Institute Coauthor, CMMI®: Guidelines for Process Integration and Product Improvement, Second Edition "This book will challenge many of your (mis)understandings about both agile delivery and CMMI. Paul thoughtfully apply.

Over the past decade, there has been an increase in attention and focus on the discipline of software engineering. Software engineering tools and techniques have been developed to gain more predictable quality improvement results. Process standards such as Capability Maturity Model Integration (CMMI), ISO 9000, Software Process Improvement and Capability determination (SPICE), Agile Methodologies, and others have been proposed to assist organizations to achieve more predictable results by incorporating these proven standards and procedures into their software process. Software Process Improvement and Management: Approaches and Tools for Practical Development offers the latest research and case studies on software engineering and development. The production of new process standards assist organizations and software engineers in adding a measure of predictability to the software process. Companies can gain a decisive competitive advantage by applying these new and theoretical methodologies in real-world scenarios. Researchers, scholars, practitioners, students, and anyone interested in the field of software development and design should access this book as a major compendium of the latest research in the field.

How to leverage the process discipline benefits of CMMI and the speed and value of Agile methods together! * REAL case studies, lessons, cautions, insights, and out-of-the-box exercises for successfully integrating CMMI and Agile - and maximizing the value of both. *Explodes the myths of CMMI and Agile - especially the myth that they can't work together! *Shows CMMI 'process-mature' organizations how to increase agility, and Agile organizations how to increase process-maturity. Thousands of organizations have implemented Capability Maturity Model Integration (CMMI) to achieve greater process maturity: many of these organizations now want to bring greater agility to their development processes. Conversely, many organizations who are succeeding with Agile methods now want the benefits associated with more mature processes. The solution is to integrate CMMI and Agile methods. Some people say it can't be done. They're wrong, and this book offers the proof. Paul McMahon systematically bridges the chasm between CMMI and Agile methods with real case study evidence and practical, 'how-to' proven techniques. McMahon begins with concise, straight-to-the-point primers and refreshers on both CMMI and Agile. Next, he introduces proven techniques for helping CMMI organizations successfully integrate Agile methods into mature

processes. He then shows how Agile organizations can increase their CMMI process maturity without compromising the agility that has brought them success. The book concludes with a set of true case study examples demonstrating how CMMI can help organizations that are trying to be agile, but have missed key ingredients of true agility.

The 7th IEEE/ACIS Conference and the 2nd IEEE/ACIS Workshop on e-Activity (IWEA 2008) featured researchers from around the world. The conference organizers selected 23 outstanding papers for this volume of Springer's Studies in Computational Intelligence.

As future generation information technology (FGIT) becomes specialized and fragmented, it is easy to lose sight that many topics in FGIT have common threads and, because of this, advances in one discipline may be transmitted to others. Presentation of recent results obtained in different disciplines encourages this interchange for the advancement of FGIT as a whole. Of particular interest are hybrid solutions that combine ideas taken from multiple disciplines in order to achieve something more significant than the sum of the individual parts. Through such hybrid philosophy, a new principle can be discovered, which has the propensity to propagate throughout multifaceted disciplines. FGIT 2009 was the first mega-conference that attempted to follow the above idea of hybridization in FGIT in a form of multiple events related to particular disciplines of IT, conducted by separate scientific committees, but coordinated in order to expose the most important contributions. It included the following international conferences: Advanced Software Engineering and Its Applications (ASEA), Bio-Science and Bio-Technology (BSBT), Control and Automation (CA), Database Theory and Application (DTA), Disaster Recovery and Business Continuity (DRBC; published independently), Future Generation Communication and Networking (FGCN) that was combined with Advanced Communication and Networking (ACN), Grid and Distributed Computing (GDC), Multimedia, Computer Graphics and Broadcasting (MulGraB), Security Technology (SecTech), Signal Processing, Image Processing and Pattern Recognition (SIP), and u- and e-Service, Science and Technology (UNESST).

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.

The field of software engineering is characterized by speed and turbulence in many regards. While new ideas are proposed almost on a yearly basis, very few of them live for a decade or a longer. Lightweight software development methods were a new idea in the latter part of the 1990s. Now, ten years later, they are better known as agile software development methods, and an active community driven by practitioners has formed around the new way of thinking. Agile software development is currently being embraced by the research community as well. As a sign of increased research activity, most research-oriented conferences have an agile software development track included in the conference program. The XP conference series established in 2000 was the first conference dedicated to agile processes in software engineering. The idea of the conference is to offer a unique setting for advancing the state of the art in research and practice of agile processes. This year's conference was the tenth consecutive edition of this international event. Due to the diverse nature of different activities during the conference, XP is claimed to be more of an experience rather than a regular conference. It offers several different ways to interact and strives to create a truly collaborative environment where new ideas and exciting findings can be presented and shared. This is clearly visible from this year's program as well.

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.

On behalf of the PROFES Organizing Committee we are proud to present the proceedings of the 10 International Conference on Product Focused Software Process Improvement (PROFES 2009), held in Oulu, Finland. Since the first conference in 1999, the conference has established its place in the software engineering community as a respected conference that brings together participants from academia and industry. The roots of PROFES are in professional software process improvement motivated by product and service quality needs. The conference addresses both the solutions found in practice as well as relevant research results from academia. To ensure that PROFES retains its high quality and focus on the most relevant research issues, the conference has actively maintained close collaboration with industry and subsequently widened its

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scope to the research areas of collaborative and agile software development. A special focus for 2009 was placed on software business to bridge research and practice in the economics of software engineering. This enabled us to cover software development in a more comprehensive manner and tackle one of the most important current challenges identified by the software industry and software research community – namely, the shift of focus from “products” to “services.” The current global economic downturn emphasizes the need for new methods and solutions for fast and business-oriented development of products and services in a globally distributed environment.

Integrating CMMI and Agile Development Case Studies and Proven Techniques for Faster Performance Improvement Addison-Wesley Professional

Despite criticism for their serious shortcomings, maturity models are widely used within organizations. The appropriate applications of these models can lead to organizational and corporate success. *Developing Organizational Maturity for Effective Project Management* is a critical scholarly publication that explores the successes and failures of maturity models and how they can be applied competently to leadership within corporations. Featuring coverage on a wide array of topics such as project management maturity, agile maturity, and organizational performance, this publication is geared toward professionals, managers, and students seeking current research on the application of maturity models to corporate success.

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