<<软件构架实践>>

图书基本信息

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内容概要

本书在第1版的基础上，根据软件生命期的特点，分预想构架、创建构架、分析构架和从一个系统至多个系统进行阐述。
本书对第1版某些内容进行了深入介绍，并增添了一些新内容：ATAM、质量需求、构架重构、用UML对构架编档和CBAM等。
此外，本书还对一些新案例进行了分析，以帮助理解软件构架如何适应商业需求。
本书是卡内基·梅隆大学软件工程研究所推荐教材，荣获取美国权威的“软件开发”杂志第九届图书效率大奖。
本书可作为软件学院及高校相关专业本科生和研究生的教材，也适合业界人士研究参考。

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作者简介

作者：（美国）林·巴斯（Len Bass） （美国）保罗·克莱门茨（Paut Clements） （美国）瑞克·凯兹曼（Rick Kazman） 林·巴斯（Len Bass），软件工程研究所（SEl）的一名离级软件工程师。
他已经编著了5本书籍，并发表了大量关于软件工程、人机交互的论文。
他曾经领导一个小组为飞行控制模拟器开发软件构架。
目前，该构架已经被用作美国空军标准。
保罗·克莱门茨（Paut Clements），软件工程研究所（SEI）的一名高级技术人员，其工作职责是开发软件构架和设计产品线。
他已经发表了30多篇关于软件设计和实时系统的论文。
瑞克·凯兹曼（Rick Kazman），软件工程研究所（SEI）的一名高级软件工程师，负责构架权衡分析工作，是沃特鲁大学和多伦多大学的副教授。
他已经发表了50多篇关于软件工程、人机交互和信息检索的论文。

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书籍目录

章节摘录

版权页： 插图： The Architecture Enables More Accurate Cost and Schedule Estimates.Cost and schedule estimates are an important management tool to enable themanager to acquire the necessary resources and to understand whether a projectis in trouble.Cost estimations based on an understanding of the system piecesare,inherently,more accurate than those based on overall system knowledge.Aswe have said,the organizational structure of a project is based on its architecture. Each team will be able to make more accurate estimates for its piece than aproject manager will and will feel more ownership in making the estimates cometrue.Second,the initial definition of an architecture means that the requirementsfor a system have been reviewed and,in some sense,validated.The more knowledge about the scope of a system,the more accurate the estimates. ARCHITECTURE AS A TRANSFERABLE,RE-USABLE MODEL The earlier in the life cycle re-use is applied,the greater the benefit that can beachieved.While code re-use is beneficial,re-use at the architectural level provides tremendous leverage for systems with similar requirements.Not only codecan be re-used but so can the requirements that led to the architecture in the firstplace,as well as the experience of building the re-used architecture.When architectural decisions can be re-used across multiple systems,all of the early decisionconsequences we just described are also transferred. Software Product Lines Share a Common Architecture.A software product line or family is a set of software-intensive systems sharing a common,managed set of features that satisfy the specific needs of a particular market segmentor mission and that are developed from a common set of core assets in a prescribed way.Chief among these core assets is the architecture that was designedto handle the needs of the entire family.Product line architects choose an architecture (or a family of closely related architectures) that will serve all envisionedmembers of the product line by making design decisions that apply across thefamily early and by making other decisions that apply only to individual members late.The architecture defines what is fixed for all members of the productline and what is variable.Software product lines represent a powerful approach tomulti-system development that shows order-of-magnitude payoffs in time to market,cost,productivity,and product quality.The power of architecture lies at theheart of the paradigm.

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