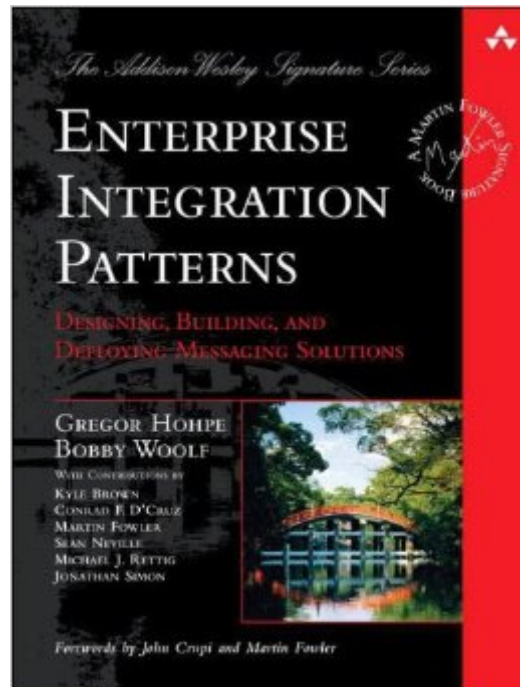# Enterprise Integration Patterns: Designing, Building, And Deploying Messaging Solutions

Synopsis

Enterprise Integration Patterns provides an invaluable catalog of sixty-five patterns, with real-world solutions that demonstrate the formidable of messaging and help you to design effective messaging solutions for your enterprise. Â The authors also include examples covering a variety of different integration technologies, such as JMS, MSMQ, TIBCO ActiveEnterprise, Microsoft BizTalk, SOAP, and XSL. A case study describing a bond trading system illustrates the patterns in practice, and the book offers a look at emerging standards, as well as insights into what the future of enterprise integration might hold. Â This book provides a consistent vocabulary and visual notation framework to describe large-scale integration solutions across many technologies. It also explores in detail the advantages and limitations of asynchronous messaging architectures. The authors present practical advice on designing code that connects an application to a messaging system, and provide extensive information to help you determine when to send a message, how to route it to the proper destination, and how to monitor the health of a messaging system. If you want to know how to manage, monitor, and maintain a messaging system once it is in use, get this book.

Book Information

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Customer Reviews

To do justice in reviewing this book, I should depict every single pattern and give you multiple examples on how it would apply to your job as a Project Manager, Software Architect, Technical Lead or a Developer. That would be a 500-page book all by itself. In short, this is one great book. The first book to actually take a complex and ever growing topic such as MOM, Message Oriented

Middleware, and give you its benefits and the best practices/patterns all in one book.The author starts by giving the reader the top reasons why messaging should be chosen for the next project:1) Remote communication2) Platform/Language Integration3) Asynchronous communication4) Variable timing5) Throttling6) Reliable Communication7) Disconnected operation8) Mediation9) Thread ManagementThe author goes into detail on each of these reasons. These reasons would convince any software architect, but the author goes even further than that and reiterates the benefits of each of these reasons and elaborates on them thru out the book.Chapter 3 of the book starts by breaking up a messaging system into its main components and briefly explaining each one:1) Message Channel2) Message3) Pipes and Filers4) Message Router5) Message Translator6) Message EndpointEach of these high level topics is then broken down and various patterns are shown for each section. Just like the GoF book, the reader can simply go the desired section and read the patterns that are associated with that "subsystem"Each section is then followed by a full-blown example, which to me is priceless. The examples are shown using the most popular middleware vendors such as TIBCO, IBM, Microsoft, Web Methods, SeeBeyond and a couple JMS vendors.

I had been waiting for this book for several years. There are many good books on software architecture using synchronous communication, but nothing on asynchronous communication --- the typical scheme when connecting existing applications. This is surprising since the underlying products (MQ, MSMQ, WebMethods, Vitria, etc.) have been around for a while, some for more than 10 years, and the techniques have become increasingly well understood by the practitioners. There are even some books on the individual products --- several on MQ for example --- but nothing more general about how to use messaging, message routing, and message transformation to build a larger system.This is the book I had been waiting for. Furthermore the authors have avoided the usual three pitfalls of technical books: it is well organized, it well written, and it is deep treatment, not at all superficial.The book is organized into 65 patterns (in the manner of the classic _Design Patterns_). Each pattern shows one typical problem in integrating applications, and how it is solved. Each pattern gives enough implementation details so it is clear how it would work, and an example or two so it is clear how it works in practice. For example the Message Expiration pattern addresses the problem of "How can a sender of a message indicate when a message should be considered stale and thus shouldn't be processed?"The writing in this book is clear. For example "A Message Expiration is like the expiration date on a milk carton. After that date, you shouldn't drink the milk." The authors have also invented icons for each of their patterns. Their icon language allows a

integration architecture to be visuallized in a way that UML does not provide.

This a book about enterprise integration solutions, authors claim that they are technology neutral, it is true. In the examples and implementations, they chose 3 most popular messaging frameworks to illustrate the patterns. However, they are pretty biased toward messaging as the "better" solution to enterprise integration strategy. It may have a lot of edges over the other approaches, sometimes it is just easy to use a simple wrapper/facade to do the integration. But I guess authors really intend to push their messaging solutions as the subtitle indicates.Having said that, this is an excellent book of message pattern language, which I believe is the first one introducing the interesting topic. The books touches from the architectural patterns, e.g., messaging bus, pipe and filters, to common design patterns, e.g., publish/subscribe, request/reply, to some patterns that most MOMs provide as integrated solutions, e.g., durable subscriber, message filter, message expiration etc. With all these patterns at hand, a system architect would be able to craft a messaging pattern-oriented enterprise integration architecture by applying the appropriate patterns compositely.The book would be better if authors describe some patterns implementation in more detail. E.g., it would be interesting to see how the message expiration is implemented, does the message contain a timer or the message channel monitor each individual message from start up? How does the channel interact with the message and check the expiry? Guaranteed delivery is another example.

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