

# Foreword

Business in real-time? That seems to be the battle cry for those industry leaders who are looking to automate their business processes both inside and outside of the corporate firewall. Indeed, since 1997 we've seen a growing interest in the science, methodology, and technology for joining applications together so they can truly automate a business, or perhaps an entire vertical, or maybe an entire economy.

Think about it. If we reach such a level of automation, car buyers will be able to determine exactly when their custom-configured car will show up at their dealer, manufacturers will never run out of that one part that holds up production, and terrorists won't have a chance, because law enforcement agencies will have truly coordinated efforts. It's an ideal world, and today we are beginning not only to understand the possibilities, but the mechanisms and approaches, as well.

Corporations today implement several cross-enterprise applications supporting a range of distinct business processes. Moreover, these business processes continue to evolve, and new processes require new services and data. This has led to a demand to integrate all enterprise applications into a unified set of business processes, composite applications, or a unified data model.

The interest in Enterprise Integration is driven by a few key factors. First, the pressure of a competitive business environment is moving IT management to shorter application life cycles. Rather than creating the same business processes, application services, and data repositories over and over again, IT managers are learning to reuse existing application services and information. Second, this integration of applications to save development dollars is providing a competitive advantage to corporations that need to share application information either within the corporation or among trading partners. A good Enterprise Integration strategy is a requirement for supply-chain integration, not only simple exchange of information but the aggregation and use of application services as well, such as when we use enabling standards such as Web services.

As a rule, we may define Enterprise Integration as the unrestricted sharing of information, services, and business processes among any connected applications or data sources in the enterprise. We need to share this information, services, and

processes without making sweeping changes to the applications or data structures. In other words, we must leave it where it lies in order for Enterprise Integration to become cost-effective.

The business value of Enterprise Integration is obvious. Enterprise Integration is the answer to the problem created by the development of the islands of automation over the past twenty or so years. For generations we've been building systems that serve a single purpose and a single set of users. There are, perhaps, instances of these stovepipe systems in your enterprise. Some are inventory-control systems, sales-automation systems, general-ledger systems, and human-resource systems. Typically, these systems were custom built using the technologies of the day, many of which were proprietary and may have used nonstandard data storage and application-development technology.

Despite the fact that the technology is old, the applications still have a great deal of value, and may be critical to the workings of the enterprise. Many of these business-critical systems are difficult to adapt to sharing information or services, and the cost of changing these systems to allow for integration may be prohibitive. A fair share of these applications run on mainframes whose use, contrary to recent reports, is actually growing.

Moreover, with the advent and acceptance of Web services, we have seen Enterprise Integration move to more of a service-oriented model. Of course, we've done service-oriented integration in the past around transaction processors and distributed objects, but we now have a widely accepted and robust standard for sharing services between many remote systems, and leveraging those services to form new applications known as composite applications. The power here is the ability to mix and match services as needed, no matter where those services reside.

In this book Bill and Beth do a great job in not only providing the basic and advanced concepts behind Enterprise Integration and how it's applied, but also provide you with a flexible methodology (guidelines, really), as to how to implement a sound Enterprise Integration project that maximizes your chances of success. Indeed, the included roadmap guiding you through the book serves as a roadmap that may guide you through the process of moving your business to real-time.

What you need to keep in mind as you read this book is the fundamental reality that Enterprise Integration is strategic to many organizations, and should be treated as such. To this end, many organizations have large dedicated teams focused on integrating internal systems as well as systems existing within partner

organizations. I have found that these are typically the companies leading their industries, making the strategic investment in time and money to save a lot of money later as well as better serve their ultimate customer.

What's unique about this book is the number of case studies that the book reveals, not only providing you with the conceptual information, but demonstrating how right-thinking organizations implement Enterprise Integration in the real world. This information is invaluable because it allows you to learn from both the successes and failures of others, allowing you to embrace opportunity as well as avoid disaster.

Remember, the ultimate goal of Enterprise Integration is to bind all enterprise systems together in such a way that any application can access any service or any piece of information without delay. It will take some time before this goal is achieved, but reading this book is a first step in the journey.

—David S. Linthicum