Business Aspects of Web Services
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In the 1990s, enterprises primarily optimized internal business processes to reduce process cost and to increase productivity leveraging Enterprise Resource Planning (ERP) application systems. Then the same enterprises decided to concentrate on their core business and outsourced their “non-core” activities. As a result they reduced their level of integration.

Therefore, inter-company application software like Supply Chain Management or Electronic Data Interchange technologies crossed the bridge between enterprises and increased the level of integration, but to a significant price for the parties in the value chain.

With the Internet and related Web service technologies like REST and SOAP becoming popular, it is now possible to out-task even fine granular activities (e.g., an external credit check service) within minutes.

This effect becomes accelerated with the boom of software-as-a-service (SaaS) applications that rely very much on Web services to integrate with other SaaS applications as well as with internet-based “e-services” in general – even next generation enterprise application software like SAP Business ByDesign leverages Web services for the internal communication between functional building blocks.

In essence, Web service has become the glue holding companies in their value chain together as “service value networks.” While a lot of technological-oriented books have been published on Web services, there is still a gap in research to look at the business impact of Web services as e.g., finding of the right Web service via marketplaces, aspects of composition, business models and pricing (strategies) of Web services.

I am happy to say now that with this book here, Christof Weinhardt and his colleagues have created a compelling book about this topic that is able to bridge this research gap and covers the main business aspects of Web services.

Walldorf
Germany

Dr. Wolfgang Faisst
Preface

In April 2009, one of the authors of this book, Thomas Meinl, was attending the World Wide Web conference in Madrid, Spain. There, he gave a talk, in which he presented the idea of Web service reservation via derivative mechanisms. During the following discussions, it became clear that for many researchers, practitioners and managers this topic, while it even only scratched basic economic and financial principles, without going into any mathematical details, was still completely beyond their scope. This became even more surprising when bearing in mind that, as most Web services are built in order to generate some quantitative (financial) profit, the related economic aspects should be considered from the very start. Therefore, even if economic issues were, are and should not be the main concern of Web service developers and decision makers, Thomas Meinl figured that it could prove to be advantageous if they had at least a general notion of the processes following their work.

Therefore, the idea came up to write a book that would make both these basic relationships and deeper economic coherencies accessible to a wider audience, in this case, an audience particularly belonging to what is known as the Web community. It was clear from the very beginning that such a book should, on the one hand, contain parts that are hands-on so that the economic principles and foundations presented there could be applied directly without necessarily consulting further literature. On the other hand, we deliberately aimed to also include more theoretic contents in order to also provide for a deeper mathematical background of the economic aspects to be presented. In order to account for a hands-on as well as a deeply theoretically founded perspective, the scope of this book covers established economic results on the hand and recent developments on the other hand. Yet, it is presented in a style that makes it comprehensible to the above mentioned audience. Thus, the purpose of the book is to pinpoint the relevance of economic principles in the vast field of Web services, and Web service networks, in particular, that has been considered largely from a technical perspective so far. In this vein, basic principles shall be illustrated by demonstrative examples and, where possible, extended onto Web services directly.
We would like to thank our families, for their patience, and Jack, the dog, who became our mascot while writing this book. We also thank Ralf Gerstner from Springer Publishing, who initiated and supported the idea of this book from the very beginning. Of course, we must not forget our colleagues who contributed with ideas, discussions and in other ways to many of the results presented in this book. We are deeply grateful to all of you.

Karlsruhe
Germany

Christof Weinhardt
Benjamin Blau
Tobias Conte
Lilia Filipova-Neumann
Thomas Meinl
Wibke Michalk
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