

## Foreword

Electronic negotiations concern the transaction of agreements on the basis of electronic media, usually the Internet. They play an essential role within a growing number of domains in the modern economy. Within recent years in consumer-to-consumer, business-to-consumer as well as in business-to-business scenarios electronic platforms for all these fields have been established, and these support the participants in the information, the agreement or in the settlement phase of their transactions.

The degree to which the user is supported varies from platform to platform. At the low end, lists of hyperlinks at a Website provide support to the user. Therefore, many authors define such platforms as electronic markets. However, this definition does not seem to be very reasonable, because under this definition all online catalogue systems form electronic markets. Since a market defines a location – even a virtual location – in which offers and requests meet and perform, several authors define an electronic market as a platform, in which at least all core phases – information, agreement and settlement – are electronically assisted.

A central component of electronic transactions is the matching of offering and requesting parties within a market – the key issue in the above-mentioned agreement phase. Therefore, initially, knowledge has to be generated on which participants are potential transaction partners. There can be several candidates. For the final decision on which transaction partner to choose, it is essential to evaluate the alternatives. A so-called ranking of the alternatives along with the preference of the participants is desirable.

Within his work, Mr. Veit is focusing exactly on this problem: How can incoming offers be matched regarding a specific request. He defines a framework in which a ranking can be generated in order to acquire an optimal decision for a desired transaction. This ranking procedure within the framework is called matchmaking. Hereby, the matchmaking procedure gets more and more complex, particularly when not only flat structures are compared but multidimensional or multiattribute offers and requests meet, i.e., the transaction decision depends on several decision criteria.

In this book Mr. Veit introduces a generic framework for multidimensional matchmaking, its implementation, and an analysis of it. The use cases de-

scribed in the book stem from the human resources domain. In this particular application, ideally suited persons are matched against vacant positions. It is obvious that such a decision should not be made by just comparing one attribute. Therefore, like in many analogous domains, several attributes and dimensions are matched.

One of the highlights in this book is the genericity of Mr. Veit's approach, based on which matchmaking can be performed over arbitrary types and offer-request structures. The implementation – which has been realized as a multi-agent system – can represent both offering and requesting agents. This framework can be applied within a huge variety of application domains of electronic negotiations within electronic markets.

Therefore, this book is an essential contribution to the e-market/e-negotiation literature and I wish the best success for its publication, for its author, and most of all for its readers.

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## Preface

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