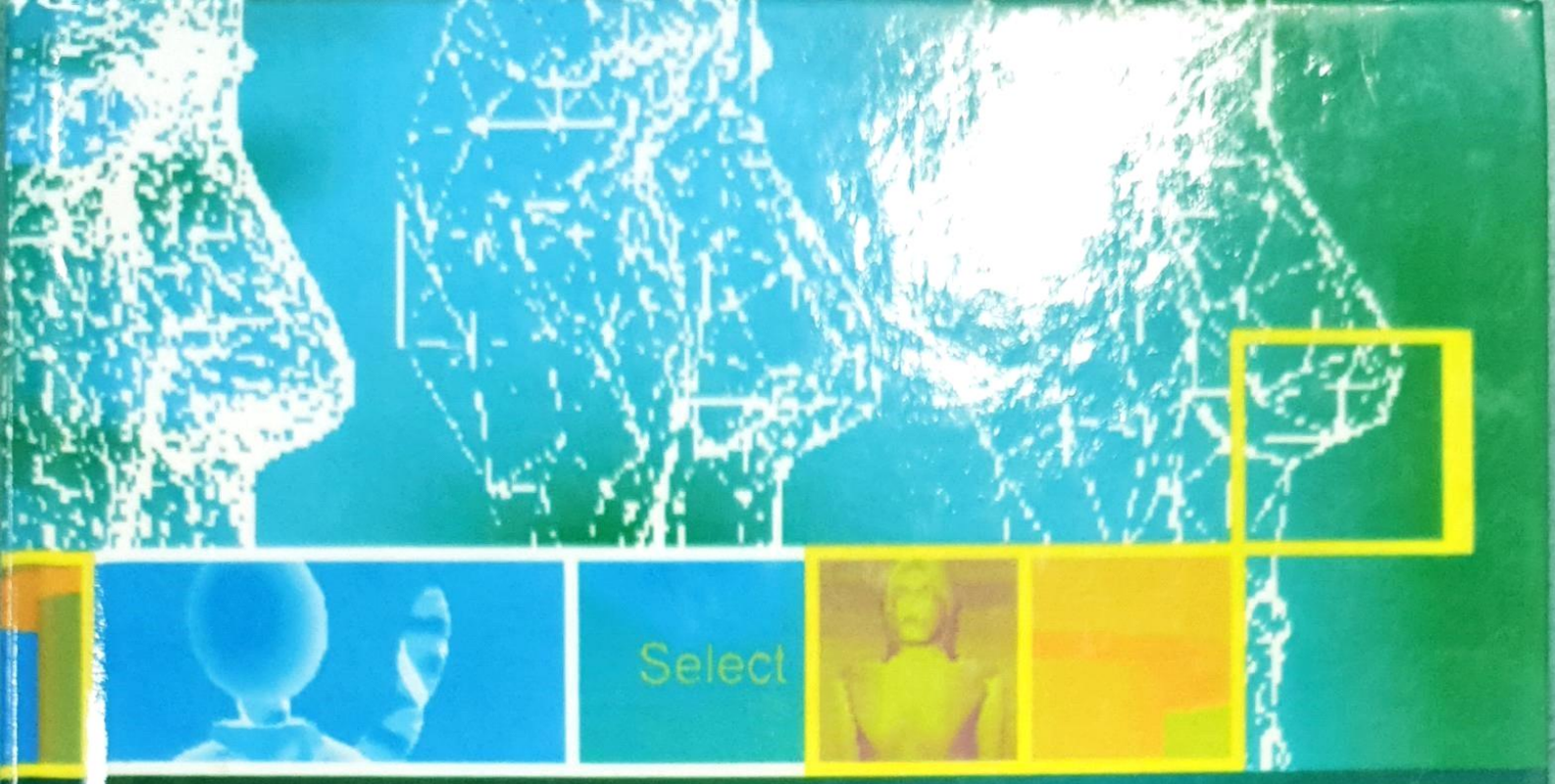


Stephan Diehl

# Distributed Virtual Worlds

## Foundations and Implementation Techniques U[illegible]/RML, Java, and CORBA

Springer

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## Foundations and Implementation Techniques Using VRML, Java, and CORBA

With 58 Figures and 7 Tables

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# Preface

Recently, with the success of Java and the existence of different interfaces between VRML and Java, it became possible to implement three-dimensional internet applications on standard VRML browsers (Plugins) using Java. With the widespread use of VRML-Browsers, e.g., as part of the Netscape Communicator and Microsoft's Internet Explorer standard distributions, everyone connected to the internet via a PC (and some other platforms) can directly enter a virtual world without installing a new kind of software. The VRML technology offers the basis for new forms of customer services, e.g., interactive three-dimensional product configuration, spare part ordering, or customer training. Also this technology can be used for CSCW in intranets.

This book has a theoretical and a practical part. The theoretical part is intended more for teachers and researchers, while the practical part is intended for web designers, programmers and students, who want to have both a hands-on approach to implementing Web 3D applications and a technically detailed overview of existing solutions for specific problems in this area.

The reader should have a good knowledge of programming languages and computers in general and should know Java or at least an object-oriented programming language. The book not only provides and explains source code, which can be used as a starting point for own implementations, but it also describes the fundamental problems and how currently known solutions work and discusses a variety of different techniques and trade-offs. Many illustrations help the reader to understand and memorize the underlying principles.

**Acknowledgments.** This book evolved from lectures at the University of Saarland and courses taught in industry. I want to thank all participants for discussions and feedback. Andreas Kerren carefully read a draft version of the book and provided constructive comments. Above all, I have to thank my wife Christine – she has been very patient with me. While I spent weekends in front of the computer, she had to take care of our two sons Luca and Jean-Luc. This book is dedicated to them.

Saarbrücken, January 2001 *Stephan Diehl*

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