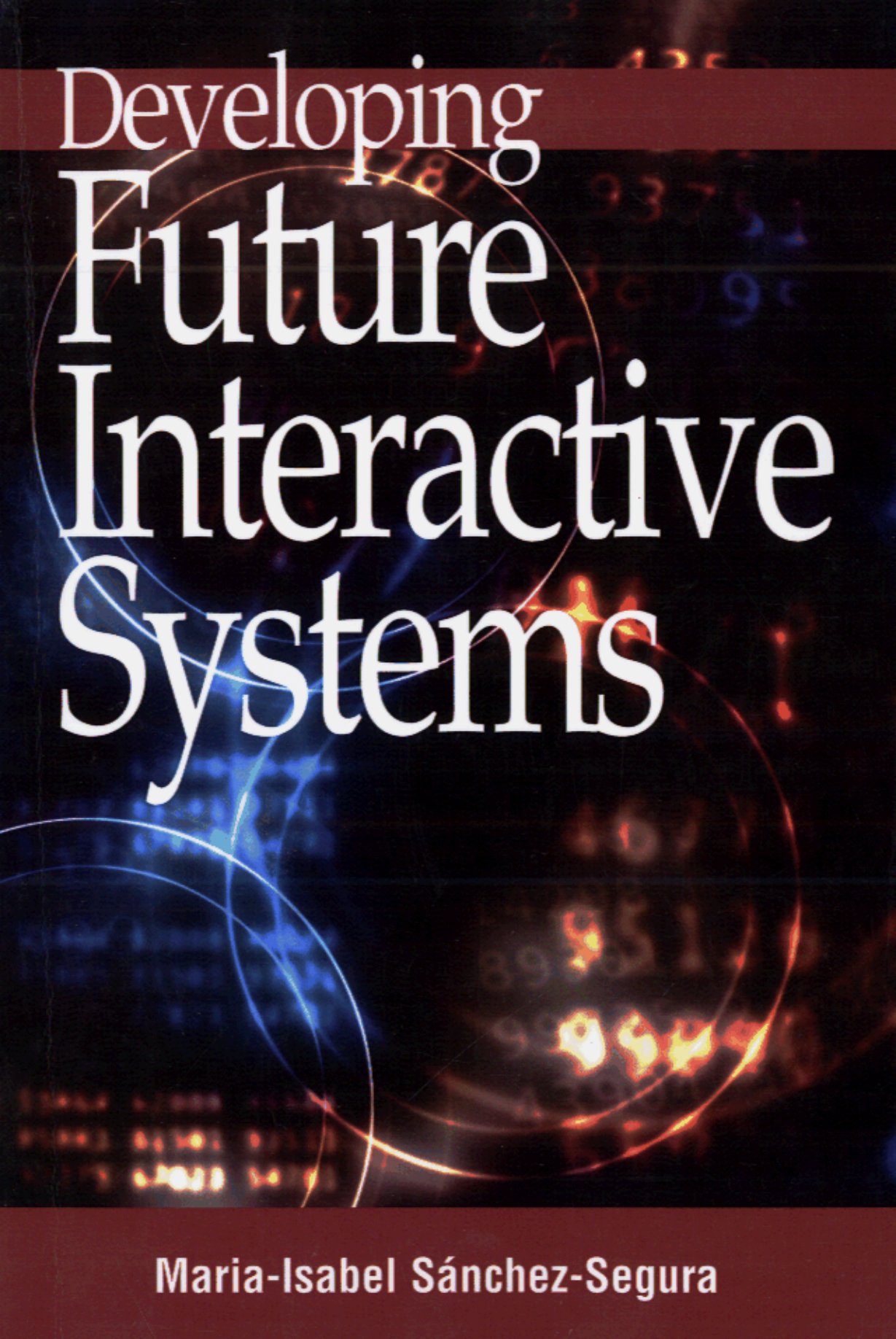




Developing Future Interactive Systems

Maria-Isabel Sánchez-Segura

Developing Future Interactive Systems

Table of Contents

Preface	v
----------------------	----------

Chapter I. Real Living with Virtual Worlds: The Challenge of Creating Future Interactive Systems	1
<i>Kirstie L. Bellman, Aerospace Integration Science Center, The Aerospace Corporation, USA</i>	

Chapter II. The Future Virtual Reality Melting Pot	40
<i>Chadwick A. Wingrave, Virginia Tech, USA</i>	

SECTION I: WHOLE VIRTUAL ENVIRONMENTS DEVELOPMENT METHODS

Chapter III. A Methodology of Design for Virtual Environments	66
<i>Clive Fencott, University of Teesside, UK</i>	

Chapter IV. SENDA: A Whole Process to Develop Virtual Environments	92
<i>Maria-Isabel Sánchez-Segura, Carlos III Technical University of Madrid, Spain</i>	
<i>Angélica de Antonio, Universidad Politécnica de Madrid, Spain</i>	
<i>Antonio de Amescua, Carlos III Technical University of Madrid, Spain</i>	

SECTION II: DESIGNING VIRTUAL ENVIRONMENTS

Chapter V. Steps Toward a Design Theory for Virtual Worlds	116
<i>Joseph A. Goguen, University of California at San Diego, USA</i>	

**Chapter VI. Conceptual Modeling of Virtual Environments Using
Hypermedia Design Techniques 153**

Paloma Díaz, Universidad Carlos III de Madrid, Spain

Susana Montero, Universidad Carlos III de Madrid, Spain

Ignacio Aedo, Universidad Carlos III de Madrid, Spain

Juan Manuel Doderó, Universidad Carlos III de Madrid, Spain

Chapter VII. Design of Believable Intelligent Virtual Agents..... 177

Pilar Herrero, Universidad Politécnica de Madrid, Spain

Ricardo Imbert, Universidad Politécnica de Madrid, Spain

**Chapter VIII. An Agent-Based Architecture for Virtual
Environments for Training 212**

Angélica de Antonio, Universidad Politécnica de Madrid, Spain

Jaime Ramírez, Universidad Politécnica de Madrid, Spain

Gonzalo Méndez, Universidad Politécnica de Madrid, Spain

SECTION III: COLLABORATIVE VIRTUAL ENVIRONMENTS AND MIXED REALITY

Chapter IX. Construction of Collaborative Virtual Environments ... 235

Anthony Steed, University College London, UK

Emmanuel Frécon, Swedish Institute of Computer Science, Sweden

**Chapter X. Toward a User-Centred Method for Studying CVEs for
Learning 269**

Daphne Economou, University of the Aegean, Greece

Steve Pettifer, University of Manchester, UK

**Chapter XI. A Component-Oriented Approach for Mixed Reality
Applications 302**

*Michael Haller, Upper Austria University of Applied Sciences,
Austria*

Glossary 332

About the Authors 339

Index 345