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Nota di contenuto	Front Cover; System-Level Design with Rosetta; Copyright Page; Contents; Acknowledgments; Foreword; Preface; Part I: Introduction; Chapter 1. Introduction; 1.1 What is System-Level Specification?; 1.2 Rosetta's Design Goals; 1.3 Anatomy of a Specification; 1.4 Learning Rosetta; Part II: The Expression Language; Chapter 2. Items, Values, Types, and Declarations; 2.1 Labels, Values, and Types; 2.2 Item Declarations and Type Assertions; 2.3 Universal Operations; Chapter 3. Expressions; 3.1 Atomic Expressions; 3.2 Function Application; 3.3 Operator Application; 3.4 If Expressions 3.5 Case Expressions3.6 Let Expressions; 3.7 Compound Expressions; Chapter 4. Elemental Types; 4.1 The Boolean Type; 4.2 The Number Types; 4.3 The Character Type; 4.4 The Element Type; 4.5 The Top and Bottom Types; 4.6 Element Literals; 4.7 Operator Result Types; Chapter 5. Composite Types; 5.1 Type Formers; 5.2 Set Types; 5.3 Multiset Types; 5.4 Sequence Types; Chapter 6. Functions; 6.1 Direct Function Definition; 6.2 Function Values and Function Types; 6.3 Evaluating Functions; 6.4 Universally Quantified Parameters; Chapter 7. Higher-Order Functions; 7.1 Domain, Range, and Return Functions 7.2 Alternate Higher-Order Function Notation7.3 Minimum and Maximum; 7.4 Quantifiers and Comprehension; 7.5 Sequences and Higher-Order Functions; 7.6 Function Inclusion and Composition;

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15.2 Defining Interactions

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## Sommario/riassunto

The steady and unabated increase in the capacity of silicon has brought the semiconductor industry to a watershed challenge. Now a single chip can integrate a radio transceiver, a network interface, multimedia functions, all the "glue" needed to hold it together as well as a design that allows the hardware and software to be reconfigured for future applications. Such complex heterogeneous systems demand a different design methodology. A consortium of industrial and government labs have created a new language and a new design methodology to support this effort. Rosetta permits designers t

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