

Reading 2: Chapter 10 –

Requirements Modeling: Scenarios, Information, and Analysis

(pp. 215–231)

Focus: Modeling as a Bridge Between Requirements and Design

This chapter focuses on how to model requirements to create clear, understandable, and traceable system descriptions.

Core Models

1. Scenario-Based Models

- *Use-cases*: Describe sequences of interactions between “actors” (users/systems) and the system.
- *Activity diagrams*: Visualize workflows.

2. Data Models

- *Class diagrams*: Represent data structures and relationships.
- *ER diagrams*: Often used for databases.

3. Flow-Oriented Models

- *DFDs (Data Flow Diagrams)*: Show data movement through a system.
- *Control flow models*: Highlight decision points and conditions.

4. Behavioral Models

- *State diagrams*: Show object state transitions based on events.
- Useful for **real-time systems** or systems with complex logic.

Techniques

- Refinement is key: Go from abstract to detailed models.
- Always tie models back to stakeholder goals.
- Use CASE tools to support consistency and version control.