Model-Based Specification

CIS 376

Bruce R. Maxim
UM-Dearborn

Model-Based Specification Overview

- System model defined using well-understood mathematical entities like sets and functions
- System state is not hidden like it is in algebraic specification
- State changes are straight forward to define
- VDM and Z are the most widely used model-based specification languages

Z Formal Language

- Based on set theory and first-order predicate logic
- Strongly typed
- Declarative language
- Makes use of a graphical construction known as a *schema*
  - provide an effective low level structuring facility
  - are useful as specification building blocks
  - can be understood fairly easily