

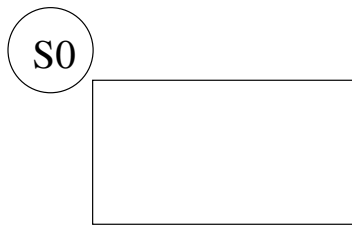
EE/CompE 243
Algorithmic State Machine Diagrams

Algorithmic State Machine (ASM, or sometimes just SM) charts represent a different format for describing a state machine. They are more of a flowchart.

Basic Building Blocks

State Box and State Label

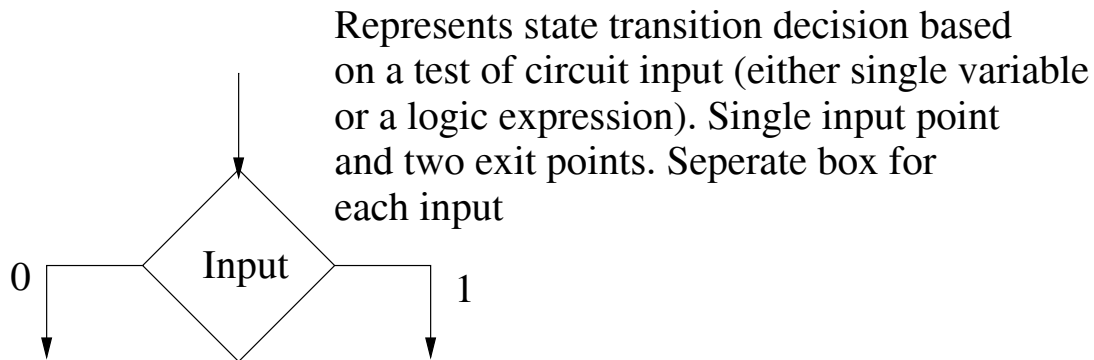
The state label is sometimes entered in the state box



Description of what the state represents (in a sequence detector, this might be something like: 001)

In the case of a Moore machine also enter the present output.

Decision Box



Represents state transition decision based on a test of circuit input (either single variable or a logic expression). Single input point and two exit points. Separate box for each input

Conditional Output Box



Specifies output associated with state transitions for a given input. Only applies to Mealy machines. Placed in path between decision box and state block.

Two representations for the same state machine

