

5.0 Introduction



What is an (A)SM chart?

- state machine :
 - often used to control a digital system that carries out a step-by-step procedure or algorithm.
- state diagram (state graph) :
 - has traditionally been used to specify the operation of the controller state machine
- (algorithmic) state machine chart (A)SM chart :
 - a special type of flowchart
 - may be used to describe the behavior of a state machine.
 - often used to design the control unit of a digital system

- **hardwiring**
 - inspect the state diagram / SM chart, write the logic equations for the control outputs & next states and implement the state machine using gates & FFs
- **microprogramming**
 - build a special computer for executing the algorithmic flowchart describing the controller of a (complex) digital system.