Chapter 2. Introductory Modeling Examples

In this chapter, several simple examples are given to introduce the reader to some basic concepts of Petri nets that are useful in modeling.

2.1 Finite State Machines

Finite state machines or their state diagrams can be equivalently represented by a subclass of Petri nets. As an example of a finite state machine, consider a vending machine which accepts either nickels or dimes and sells 15¢ or 20¢ candy bars. For simplicity, suppose the vending machine can hold up to 20¢. Then, the state diagram of the machine can be represented by the Petri net shown in Fig. 2.1, where the five states are represented

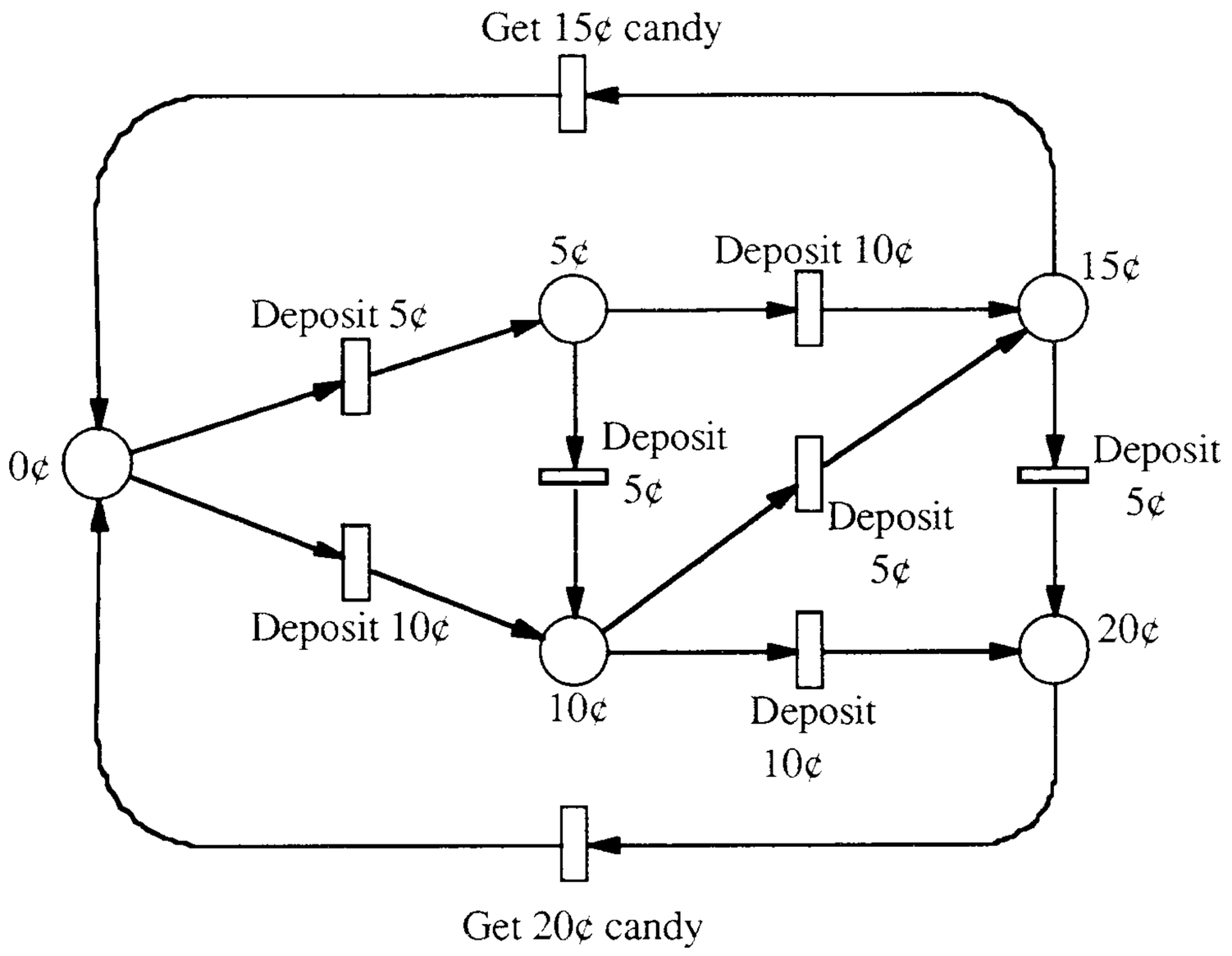

Fig. 2.1. A Petri net (a state machine) representing the state diagram of a vending machine, where coin return transitions are omitted.