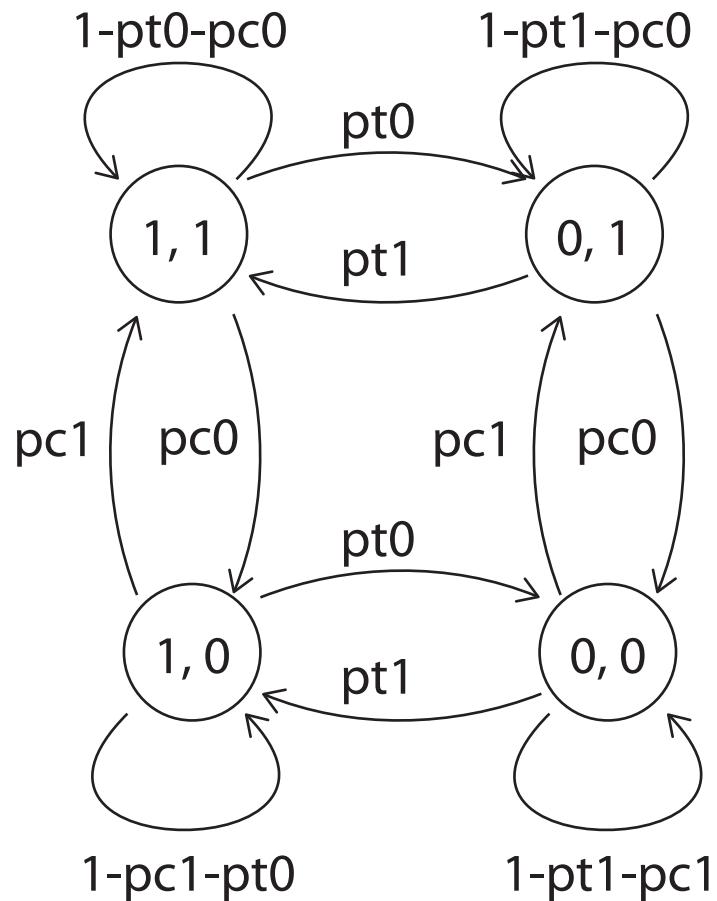


## MARKOV CHAIN MODEL OF SWITCH FAILURE



$$P(t_{\text{fail}} \in [t, t + dt]) = pt_0 dt + \mathcal{O}(dt)^2$$

$$P(c_{\text{fail}} \in [t, t + dt]) = pc_0 dt + \mathcal{O}(dt)^2$$

$$P(t_{\text{fix}} \in [t, t + dt]) = pt_1 dt + \mathcal{O}(dt)^2$$

$$P(c_{\text{fix}} \in [t, t + dt]) = pc_1 dt + \mathcal{O}(dt)^2$$

$$pt_0 = 0.004 \text{ per sec}$$

$$pt_1 = 2.000 \text{ per sec}$$

$$pc_0 = 0.001 \text{ per sec}$$

$$pc_1 = 1.000 \text{ per sec}$$