

Modeling and Verification of Probabilistic Systems

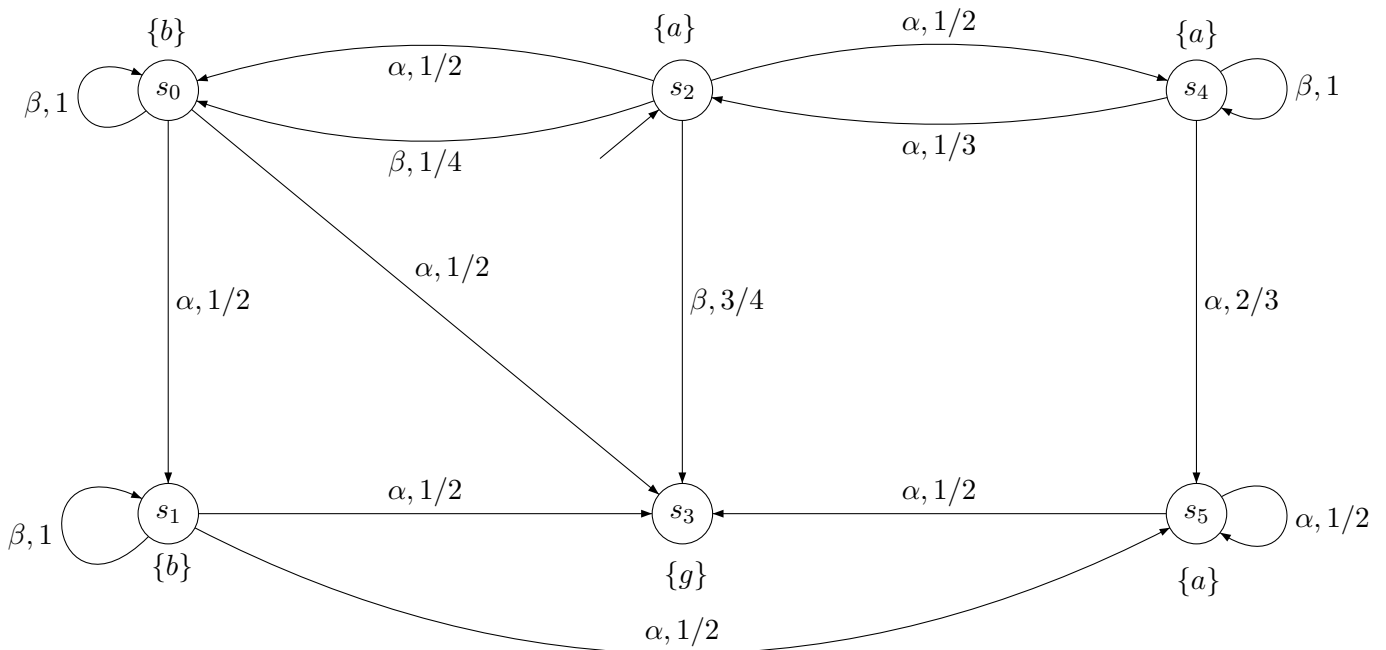
Summer term 2011

– Series 9 –

Hand in on 22th June before the exercise class.

Exercise

(2 + 2 + 2 + 2 + 2 = 10 points)



Consider the MDP as shown in figure. Find out the satisfaction sets of the following PCTL formulae:

- $\mathbb{P}_{\geq .5} \bigcirc a, \mathbb{P}_{\geq .6} \bigcirc b$
- $\mathbb{P}_{\geq .3} \neg a \bigcup^{\leq 2} g, \mathbb{P}_{\leq 1} \neg b \bigcup^{\leq 3} g$
- $\mathbb{P}_{\leq .3} \Diamond g$