

Advanced Model Checking  
 Summer term 2009

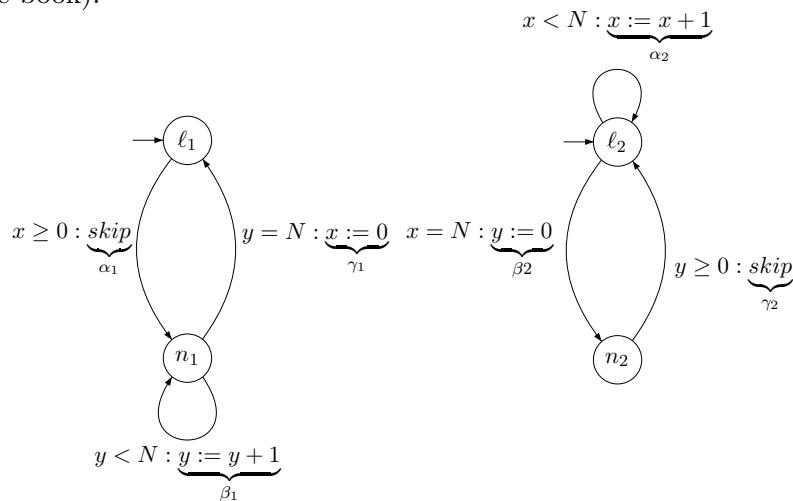
## – Series 6 –

Hand in on June 1'st before the exercise class.

## Exercise 1

(4 points)

Compute the ample sets for at least four successive states in  $\hat{TS} = TS(PG_1 \parallel PG_2)$  by means of Algorithm 41 (page 634 in the book).


 Abbildung 1: Program graphs  $PG_1$  (left) and  $PG_2$  (right)

## Exercise 2

(3 + 3 points)

Consider the following transition systems.

- (i). Give the switching function of Train, Controller and Gate respectively.
- (ii). Give the switching function of the parallel composition of Train, Controller and Gate.

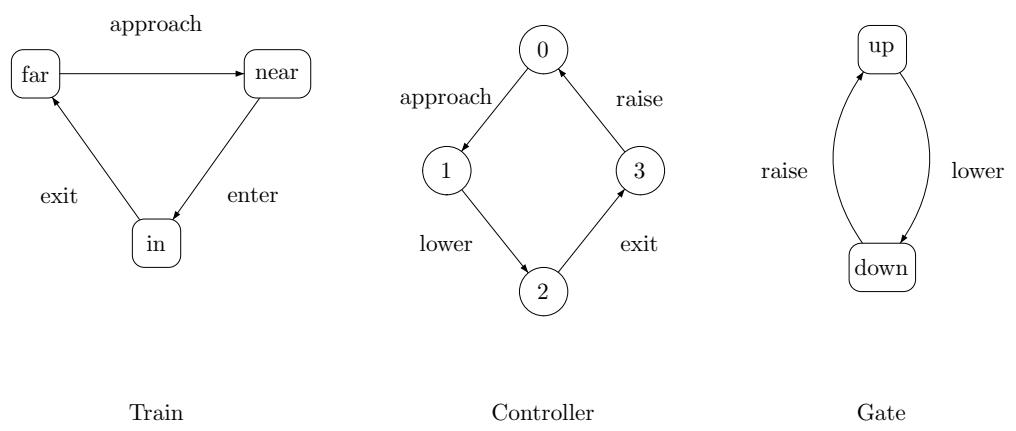


Abbildung 2: Componentes of a railroad crossing.