Bus Systems

Exercise 1

Prof. Dr. Reinhard Gotzhein, Dr. Thomas Kuhn

Exercise 1

Organization

- Thursdays, every 2nd week, 17:15
    - Exercise appointments are published in KIS for this lecture

- Excersise sheets are not mandatory
    - You can hand them in via EMail or via hardcopy in the lecture

Exercise 1

Finite state machines

- Formulate a traffic light as finite state machine
  - The traffic light has four states (red/red_yellow/green/yellow)
  - The traffic light initially is *on* and in state red
    - Transition from red -> red_yellow after 10 seconds
    - Transition from red_yellow -> green after 1 second
    - Transition from green -> yellow after 10 seconds
    - Transition from yellow -> red after 1 second
  - When signal *switch_off* is received
    - It moves to blinking if it is a traffic light on a *non_priority_road*
    - It switches off if it is on a *priority_road*

Exercise 1

Energy or Power signal

- Show mathematically: do the following signal functions describe an energy signal, a power signal, or neither an energy nor a power signal?

    - $s(x) = x$

    - $s(x) = x^2$