OsuRV projekat

UART communication with two RPi

Zadatak je da implementiramo UART na raspberry pi koristeci :

- ioctl() for addr/protocol  
- read()/write() data  
- Bit banging with gpio.h  
- hardware periph

literatura I izvori informacija :

<https://www.mbtechworks.com/hardware/raspberry-pi-UART-SPI-I2C.html>

<http://www.simplyembedded.org/tutorials/msp430-uart/>

<https://www.arduino.cc/reference/en/language/functions/communication/spi/>

<https://docs.arduino.cc/learn/communication/wire>

Za bazu ćemo koristiti vežbe 7 :

* Tasks done:
  + copy motor\_ctrl driver to uni\_coms driver and rename
  + only header in include, main.c and gpio.c/.h
  + in main.c rename stuff and cut not needed, only gpio.
  + Check sw\_pwm.c for gpio init and use
    - TX – out from write()
    - RX – in to read()
  + bit-bang UART
    - Blocking write/read
    - No buffering
    - Poll gpio
    - no timer, use delay for 1ms
  + Test
    - Loop to itself
    - Need two threads from user space, 1st write(), 2nd read()
* Build-ovanje i pokretanje rešenja:
  + Na oba RPi pokrenuti dva terminal u jednom terminalu namestiti putanju do drajvera, a na drugom do testne aplikacije
  + Build-ovanje:
    - Terminal za drajver:
      * Uneti make build
      * Uneti make start
    - Terminal test:
      * ./waf configure
      * ./waf build
  + Pokretanje:
    - U terminalu za test na jednom RPi unosimo ./build/test\_receive
    - Na drugom RPi u terminalu za test unosimo ./build/test\_send

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