Resources for FPGA-Vision Lecture and Remote-Lab

Documents

- FPGA-Vision_Overview.pdf (2 pages)
- Lecture-Slides_FPGA-Vision in pptx and pdf

Video Lectures

- "FPGA Vision – Introduction" (2:26)
- "FPGA Vision – Lane Detection" (9:58)
- "FPGA Vision – Low-Power Design" (15:48)
- "FPGA Vision – Circuit Design" (14:18)
- "FPGA Vision – VHDL Simulation" (10:13)
- "FPGA Vision – FPGA Remote-Lab" (9:09)
- "FPGA Vision – Next Steps" (2:39)

C-Code for Edge-Detection

- lane_float.c
- lane_fixed.c
- lane_testbench.c
- bmp2sim.c
- sim2bmp.c
- bmp24_io.c

Files for FPGA-Implementation and Simulation

- lane.vhd
- lane_sobel.vhd
- lane_linemem.vhd
- lane_g_matrix.vhd
- lane_g_root_IP.vhd
- lane_g_root.mif
- lane_sync.vhd
- sim_lane.vhd
- lane_default_Cyclone_IV.qsf
- lane_default_Cyclone_V.qsf
- lane.sdc
- lane_g_root_ROM.ods

Test Images

- street_A.bmp, street_B.bmp, street_C.bmp

List of Resources

- FPGA-Vision_Resources.pdf (1 page, this document)

Availability

All videos, the source files and the access to the remote-lab are available on the project webpage: http://h-brs.de/fpga-vision-lab

Usage of the different files is explained in the video lectures.

C-code and files for FPGA-implementation are provided "as is". The files are for educational purpose and without any warranty.

License

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