

Report Labwork 3

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Hello, CUDA!

- Firstly, I calculate the size of pixels.
- Secondly, I allocate the input memory and the output memory of CUDA with *cudaMalloc()* function.
- Thirdly, I copy CUDA Memory from CPU to GPU with *cudaMemcpy()* function in *cudaMemcpyHostToDevice* mode.
- Fourthly, I set the block size *blockSize* to 64 and calculate number of block equal to

$$blockSize = pixelCount / (blockSize * 3)$$

.

- Fifthly, I init the *rgb2grayCUDA* with *numBlock*, *blockSize* with the input memory and the output memory.
- Sixthly, I copy the output image with *cudaMemcpy()* function in *cudaMemcpyDeviceToHost* mode.
- Finally, I clear the memory with *cudaFree()* function.
- The result:

USTH ICT Master 2018, Advanced Programming for HPC.

Warming up...

Starting labwork 3

labwork 3 elapsed 10.7ms



Figure 1: Labwork output image