BCN_Random

Parallel random variates generator for GPUs based on normal numbers

www.deakin.edu.au/~gleb/bcn_random.html

BCN_Rand calculates pseudorandom numbers in the range (0,1) and has a serial and parallel implementation.

Parallel Implementation

The parallel implementation assumes that CUDA SDK and the CUDA Programming Examples have been installed on the system. The simplest approach is to create a new directory within the src folder within the SDK (/NVIDIA_GPU_Computing_SDK/C/src/) and extract the files. The make file will compile the example with the command:

nvcc -O3 -gencode arch=compute_20,code=sm_20 bcnrand.cu -o bcnrand

There are two examples of use within the file bcnrand.cu, a timing example that writes results back to global memory, and a simple inline example that calculates the percentage of random numbers under a given value.

Serial Implementation

The serial implementation is written in C and has been tested with a variety of compilers, including gcc 4.0, VC 64-bit and VC 32-bit. Our compiler of choice is gcc 4.0 with the flags –m64 and –O3.

Please see the website for more information www.deakin.edu.au/~gleb/bcn_random.html