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KOAPing With The OpenCL API

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Abstract: KOAP, pronounced "cope," is a freely available tool for developing OpenCL applications. It's purpose is to allow the programmer to aggregate and simplify calls to the OpenCL API. KOAP accepts as input a file containing (or including) both the OpenCL program and the host C program. KOAP understands several directives, each of which is prefixed with a $ character. When KOAP is run, these directives are replaced with the requisite OpenCL API calls. KOAP input is significantly less verbose and simpler to write than the OpenCL API calls that KOAP generates.
KOAP achieves its brevity by limiting the flexibility of the API calls. Many arguments generated by KOAP to the API calls are the same for every input. Most of the functionality exposed to the programmer is the ability to set up a generic environment, allocate memory on the OpenCL device, run kernels, and move data between the device and the host.

Keywords: GPU, OpenCL, parallel programming

Speaker: An active member of Aggregate.Org since his freshman year, Frank Roberts earned his undergraduate Computer Engineering degree here at the University of Kentucky and is working toward his masters. His research background includes image processing, genetic algorithms, cluster supercomputing, and GPU programming with OpenCL. He is currently studying techniques for automatic anomaly detection in time series.

When: 4PM, Wed., February 5, 2013

Where: 108 Marksbury

RSVP required? no

Refreshments/lunch served? no

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