

Weekly Report

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Week 17: 23 April 2008

Summary of activities since last meeting

Last meeting: 02 March 2009

Next meeting: 23 April 2009

Goals and Work targets

Goals for this week

- Try and create a simple test program using OpenCL
- Find a paper relating to heterogeneous programming
- Continue with more complex experimentation with OpenMP API

Goals Achieved

- Decided to use OpenCL example programs as a test
- Found and read a paper[1] which was about an architecture and programming environment for a heterogeneous multi-core multi-threaded environment
- I did not experiment much with the OpenMP API, rather I found out more about the directives, clauses and environmental variables available

Proposed goals for next week

- Refine OpenCL example programs to allow for testing
- Experiment with the various OpenMP directives, clauses and environmental variables

Rate your work performance

- Not as much was achieved as I had hoped
- This is due to the lack of resources I had at home and the fact that it was holidays
- The graduation proceedings from Thursday onwards resulted in limited time to do work once I had returned to Grahamstown

Issues

- Did not manage to find out if OpenMP used all cores when running threads.
- Could not get the *TOP* command to run in the background to test this

Tasks/Learning

- The paper[1] has brought to light some issues that could help with my project
- Learned a bit more about OpenMP environmental variables, clauses and directives

Research

- Reading the heterogeneous programming paper was very useful in uncovering some threading uses of the OpenMP API

References

- [1] Perry H. Wang, Jamison D. Collins, Gautham N. Chinya, Hong Jiang, Xinmin Tian, Milind Girkar, Nick Y. Yang, Guei-Yuan Lueh, and Hong Wang. Exochi: architecture and programming environment for a heterogeneous multi-core multithreaded system. In *PLDI '07: Proceedings of the 2007 ACM SIGPLAN conference on Programming language design and implementation*, pages 156–166, New York, NY, USA, 2007. ACM.