CS540 Practice Assignment 10

Dustin Ingram, Aaron Rosenfeld, Tom Wambold $\label{eq:December 9, 2011}$

1 Tasks

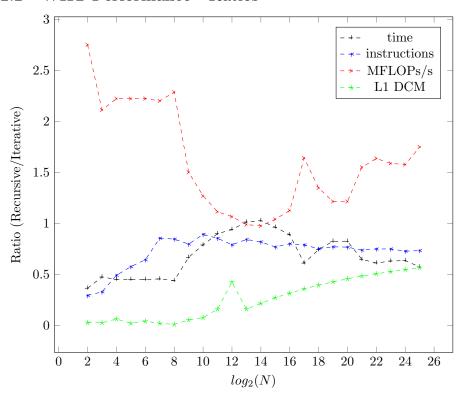
- 1. Modify the measure program to use PAPI to time WHT algorithms or generate other metrics such as instruction count or cache misses. (see pcl-prof for a template that used an older API for the hardware performance counters.)
- 2. Using the original WHT package, gather cycle count, instruction count, and cache misses for iterative and recursive WHT algorithms. Create a single plot of the ratios for each metric of the iterative to recursive algorithm. Additionally experiment with increased radix for both the recursive and iterative algorithms.
- 3. Using the original WHT package, gather cycle count, instruction count, and cache misses for a collection of random WHTs and produce histogram for each of the three metrics. You will need to write a script to generate and time random WHT algorithms (see the matlab code for a model).

2 Results

2.1 Modification of the measure program

The measure program was modified to use PAPI to time the WHT algorithms.

2.2 WHT Performance - Ratios



${\bf 2.3 \quad WHT \; Performance \; \textbf{-} \; Histograms}$

