Research Report

Monday 04/14/2014

Wei Wang

What I needed to do

Get PNNL code variants

Get Cache info of Covariance Polybench to correlate to Power consumption

Progress & Problems

1. Tested ROSE-CHiLL framework to do loop transformation

   – Standalone ChiLL cannot take .c as input, turns to ROSE-ChiLL

   – ROSE-CHiLL only works on simple Polybench like gemver,gemm currently

   – PNNL code has error related to ROSE compilation

2. Comparing with EJ's gen-PAPI scripts to

   – Decide which way is the right way to get cache info (i.e. where to add PAPI calls)

   – Writing scripts to gen PAPI calls to each transformation

Side-track

ASONAM2014 submission

- – Trimming encoding algorithm (to emphasize similarity, not encoding)

- – Other misc.

- – Waiting for new similarity results to be added

- – Deadline is Wednesday midnight ~ 3AM

PNNL code debugging and instrumentation

- – got energy consumption of scaled runs (2threads,4threads,8threads, 16threads).

The plan

Look at the other python-written auto-tuning framework developed by Argonne (now Oregon) personnel.

Get PAPI code run for covariance transformation