15-740 Project Milestone

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1 Major Changes

There have been no major changes since the proposal.

2 Accomplishments So Far

We have implemented quasi-sequential single stream-buffer next-N-line instruction prefetching, as a patch to the out-of-order SimpleScalar simulator.

We have built part of the OOCSB suite of C++ benchmarks for SimpleScalar.

We have spent an inordinate amount of CPU time running benchmarks, as can be seen on our web page.

3 Meeting Our Milestone

We have essentially achieved our milestone.

4 Surprises

We did note that several of the OOCSB benchmarks appear to be incompatible with SimpleScalar 3.0 due to unimplemented system calls.

We did not expect `applu` to require approximately 1.5 days per run. It's still going.

5 Revised Schedule

We may shift our focus to optimizing the prefetcher, perhaps not requesting purely linearly...

6 Resources Needed

Arguably, our benchmarks would go much more quickly with a few quad-Xeons at our disposable. We regret to say that this is rather unrealistic, and that in reality we don't really *need* that amount of CPU power.