

# 15-740 Project Milestone

An-Cheng Huang  
<pach@cs.cmu.edu>

Leejay Wu  
<lw2j@cs.cmu.edu>

November 10, MCMXCIX

## 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 disposal. We regret to say that this is rather unrealistic, and that in reality we don't really *need* that amount of CPU power.