Portland State University

ECE 587/687

Running the Simplescalar Simulator

Documentation

- Tutorial (hacker's guide)
- Technical report
- Simulator source files are well documented
- Tutorial and technical report are available through the class D2L site

Simulator Download Instructions

- Download the following file:
  - http://www.cecs.pdx.edu/~zeshan/ss.tar.gz
- Save the file to your Linux home directory
- From your home directory, unpack the file using the following command:
  - gunzip ss.tar.gz
  - tar xvf ss.tar
- The file creates a new directory "simulator" in your home directory

Simulator Directories

- Simulator models
  - simulator/ss3/
- Benchmarks:
  - SPEC95 binaries: simulator/bench/little/
  - SPEC95 inputs: simulator/input/ref
  - SPEC95 outputs: simulator/output/ref

Compiling and Running the Simulator

- Compile Simplescalar from a Linux machine (e.g., ruby.cat.pdx.edu or rita.cat.pdx.edu):
  - cd $HOME_DIR/simulator/ss3/
  - make
- Run benchmarks:
  - cd $HOME_DIR/simulator
  - Edit the $exp_dir line in Run.pl to point to the simulator directory
  - ./Run.pl –db ./bench.db –dir results/gcc1 –benchmark gcc –sim $HOME_dir/simulator/ss3/sim-outorder –args "-fastfwd 1000000 –max:inst 1000000" >& results/gcc1.out
- Benchmarks include: gcc, li, perl, go, and ijpeg