

Tested on an ibis_sandybridge system.

>5% speedup marked as **green**. Slowdown marked as **red**.

PGO Instrumented LLVM to compile a large C++ program

(walltime of average of 10 runs)

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w/o preinline      w/ preinline      speedup%
97.10s             48.36s            +100.01%
```

Google internal benchmarks

Google Benchmark preinline speedup%

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C++_benchmarkk01      +511.08%
C++_benchmarkk02      +1.69%
C++_benchmarkk03      +18.68%
C++_benchmarkk04      +26.18%
C++_benchmarkk05      +3.64%
C++_benchmarkk06      +623.64%
C++_benchmarkk07      +337.70%
C++_benchmarkk08      +393.90%
C_benchmarkk09        +13.51%
C_benchmarkk10        +4.74%
C++_benchmarkk11      +31.10%
C++_benchmarkk12      +0.62%
C++_benchmarkk14      +5.19%
C_benchmarkk15        +0.01%
C++_benchmarkk16      +50.98%
C++_benchmarkk17      +273.01%
C++_benchmarkk18      +414.17%
C++_benchmarkk19      +27.58%
C++_benchmarkk20      +12.32%
C_benchmarkk21        +0.82%
C++_benchmarkk22      +19.40%

geometric mean        +74.82%
```

SPEC2006 C and C++ programs

(walltime in seconds of 20 runs, train input)

benchmark	w/o preinline	w/ preinline	speedup%
433.milc (C)	19.5	18.2	7.14%
444.namd (C++)	8.18	8.08	1.24%
447.dealII (C++)	28.4	18.6	52.69%
450.soplex (C++)	4.80	4.52	6.19%
453.povray (C++)	7.95	7.46	6.57%
470.lbm (C)	40.5	38.3	5.74%
482.sphinx3 (C)	6.15	6.00	2.50%
400.perlbench (C)	31.4	31.6	-0.63%
401.bzip2 (C)	43.8	44.5	-1.57%
403.gcc (C)	0.915	0.910	0.55%
429.mcf (C)	15.9	15.0	6.00%
445.gobmk (C)	79.8	78.0	2.31%
456.hmmer (C)	38.9	38.8	0.26%
458.sjeng (C)	121	119	1.68%
462.libquantum (C)	1.96	1.29	51.94%
464.h264ref (C)	106	106	0.00%
471.omnetpp (C++)	61.8	55.6	11.15%
473.astar (C++)	92.4	89.9	2.78%
483.xalanbmk (C++)	104	84.2	23.52%