



SPEC® CFP2006 Result

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Dell Inc.

SPECfp®2006 = 17.6

Dell Precision 390 (Intel QX6800, 2.93 GHz)

SPECfp_base2006 = 17.1

CPU2006 license: 55

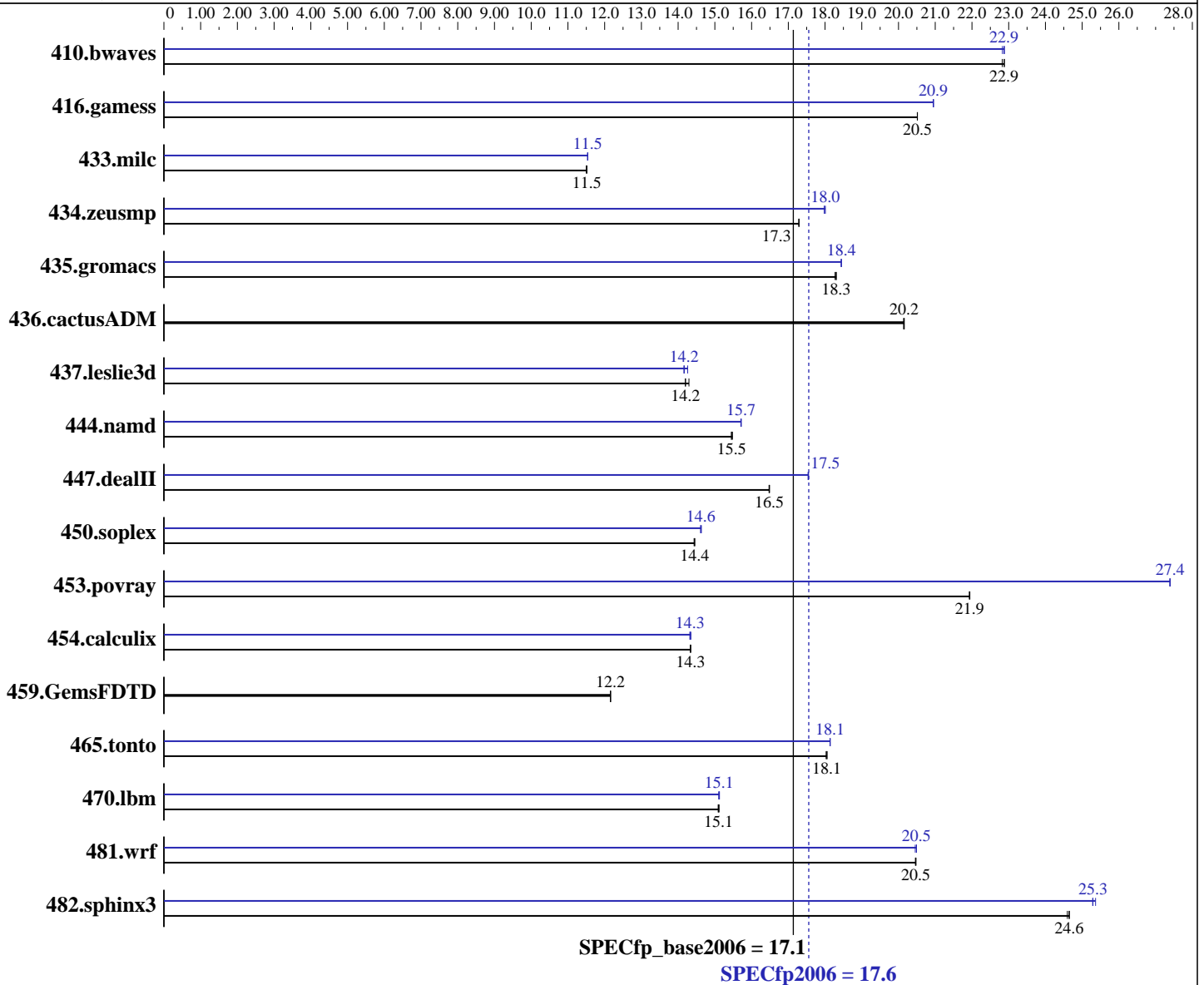
Test date: Aug-2007

Test sponsor: Dell Inc.

Hardware Availability: Sep-2007

Tested by: Dell Inc.

Software Availability: Jun-2007



Hardware

CPU Name: Intel Core 2 Extreme QX6800
 CPU Characteristics: 1066 MHz Bus Speed
 CPU MHz: 2933
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip
 CPU(s) orderable: 1 chip
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 8 MB I+D on chip per chip, 4 MB shared / 2 cores

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Software

Operating System: Windows XP Professional x64 Edition SP2
 Compiler: Intel C++ Compiler for Intel 64, Version 10.0
 Build 20070426 Package ID: W_CC_P_10.0.025
 Intel Visual Fortran Compiler for Intel 64,
 Version 10.0
 Build 20070426 Package ID: W_FC_P_10.0.025
 Microsoft Visual Studio 2005 SP1
 Auto Parallel: No
 File System: NTFS

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L3 Cache: None
 Other Cache: None
 Memory: 8 GB (4x2 GB 667 MHz ECC CL5 DDR2)
 Disk Subsystem: 1 x 80 GB SATA 7200 RPM
 Other Hardware: None

System State: Default
 Base Pointers: 32/64-bit
 Peak Pointers: 32/64-bit
 Other Software: MicroQuill SmartHeap Library 8.0 for x64

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	594	22.9	595	22.8	594	22.9	594	22.9	595	22.8	594	22.9
416.gamess	954	20.5	955	20.5	954	20.5	935	20.9	935	21.0	935	20.9
433.milc	798	11.5	797	11.5	797	11.5	796	11.5	796	11.5	796	11.5
434.zeusmp	526	17.3	526	17.3	526	17.3	506	18.0	505	18.0	506	18.0
435.gromacs	391	18.3	390	18.3	390	18.3	387	18.4	387	18.4	387	18.4
436.cactusADM	593	20.2	593	20.2	593	20.1	593	20.2	593	20.2	593	20.1
437.leslie3d	662	14.2	658	14.3	662	14.2	664	14.2	659	14.3	663	14.2
444.namd	519	15.5	518	15.5	519	15.5	511	15.7	510	15.7	510	15.7
447.dealII	694	16.5	694	16.5	694	16.5	652	17.5	652	17.5	652	17.6
450.soplex	578	14.4	577	14.5	577	14.4	571	14.6	571	14.6	570	14.6
453.povray	243	21.9	243	21.9	242	21.9	194	27.4	194	27.4	194	27.4
454.calculix	575	14.3	576	14.3	575	14.3	576	14.3	575	14.3	576	14.3
459.GemsFDTD	873	12.2	873	12.2	873	12.2	873	12.2	873	12.2	873	12.2
465.tonto	545	18.1	546	18.0	545	18.1	543	18.1	543	18.1	542	18.1
470.lbm	911	15.1	910	15.1	909	15.1	908	15.1	910	15.1	909	15.1
481.wrf	546	20.5	546	20.5	546	20.5	546	20.5	545	20.5	545	20.5
482.sphinx3	792	24.6	791	24.7	791	24.6	771	25.3	768	25.4	771	25.3

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

General Notes

Binaries were built on Windows Vista Ultimate (64-bit)

Base Compiler Invocation

C benchmarks:
icl -Qstd=c99

C++ benchmarks:
icl

Fortran benchmarks:
ifort

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Base Compiler Invocation (Continued)

Benchmarks using both Fortran and C:
icl -Qstd=c99 ifort

Base Portability Flags

```

410.bwaves: -DSPEC_CPU_P64
416.gamess: -DSPEC_CPU_P64
433.milc: -D_Complex= -DSPEC_CPU_P64
434.zeusmp: -DSPEC_CPU_P64
435.gromacs: -D_Complex= -DSPEC_CPU_P64
436.cactusADM: -D_Complex= -DSPEC_CPU_P64 -Qlowercase /assume:underscore
437.leslie3d: -DSPEC_CPU_P64
444.namd: -DSPEC_CPU_P64 /TP
447.dealII: -D_Complex= -DSPEC_CPU_P64 -DBOOST_NO_INTRINSIC_WCHAR_T
-DDEAL_II_MEMBER_VAR_SPECIALIZATION_BUG
450.soplex: -DSPEC_CPU_P64
453.povray: -DSPEC_CPU_P64 -DSPEC_CPU_WINDOWS_ICL
454.calculix: -D_Complex= -DSPEC_CPU_P64 -DSPEC_CPU_NOZMODIFIER
-Qlowercase
459.GemsFDTD: -DSPEC_CPU_P64
465.tonto: -DSPEC_CPU_P64
470.lbm: -D_Complex= -DSPEC_CPU_P64
481.wrf: -DSPEC_CPU_P64 -DSPEC_CPU_WINDOWS_ICL
482.sphinx3: -D_Complex= -DSPEC_CPU_P64

```

Base Optimization Flags

C benchmarks:

```

-fast -Qauto_ilp32 /F950000000 shlW64M.lib
-link /FORCE:MULTIPLE

```

C++ benchmarks:

```

-fast -Qcxx_features -Qauto_ilp32 /F950000000 shlW64M.lib
-link /FORCE:MULTIPLE

```

Fortran benchmarks:

```

-fast /F950000000 -link /FORCE:MULTIPLE

```

Benchmarks using both Fortran and C:

```

-fast -Qauto_ilp32 /F950000000 -link /FORCE:MULTIPLE

```



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Peak Compiler Invocation

C benchmarks:
icl -Qstd=c99

C++ benchmarks:
icl

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icl -Qstd=c99 ifort

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

433.milc: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast
-Qunroll2 -Oa -Qauto_ilp32 /F950000000 sh1W64M.lib
-link /FORCE:MULTIPLE

470.lbm: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast
-Qunroll2 -Qscalar-rep- -Qprefetch -Qauto_ilp32
/F950000000 sh1W64M.lib -link /FORCE:MULTIPLE

482.sphinx3: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast
-Qunroll2 -Qauto_ilp32 /F950000000 sh1W64M.lib
-link /FORCE:MULTIPLE

C++ benchmarks:

444.namd: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Oa
-Qcxx_features -Qauto_ilp32 /F950000000 sh1W64M.lib
-link /FORCE:MULTIPLE

447.dealII: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast
-Qprefetch -Qcxx_features -Qauto_ilp32 /F950000000
sh1W64M.lib -link /FORCE:MULTIPLE

450.soplex: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast
-Qcxx_features -Qauto_ilp32 /F950000000 sh1W64M.lib
-link /FORCE:MULTIPLE

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Peak Optimization Flags (Continued)

453.povray: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast
-Qansi-alias -Qcxx_features -Qauto_ilp32 /F950000000
sh1W64M.lib -link /FORCE:MULTIPLE

Fortran benchmarks:

410.bwaves: ONESTEP -fast /F950000000 -link /FORCE:MULTIPLE

416.gamess: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast
-Qunroll2 -Ob0 -Qansi-alias -Qscalar-rep- /F950000000
-link /FORCE:MULTIPLE

434.zeusmp: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -QxT -O2
-Qprec-div- -Qunroll0 -Qscalar-rep- /F950000000
-link /FORCE:MULTIPLE

437.leslie3d: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast
/F950000000 -link /FORCE:MULTIPLE

459.GemsFDTD: basepeak = yes

465.tonto: Same as 437.leslie3d

Benchmarks using both Fortran and C:

435.gromacs: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Oa
-Qauto_ilp32 /F950000000 -link /FORCE:MULTIPLE

436.cactusADM: basepeak = yes

454.calculix: -fast -Qauto_ilp32 /F950000000
-link /FORCE:MULTIPLE

481.wrf: Same as 454.calculix

The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/dell.ic10.windows.flags.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/dell.ic10.windows.flags.xml>



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