SPEC® CFP2006 Result

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Dell Inc.

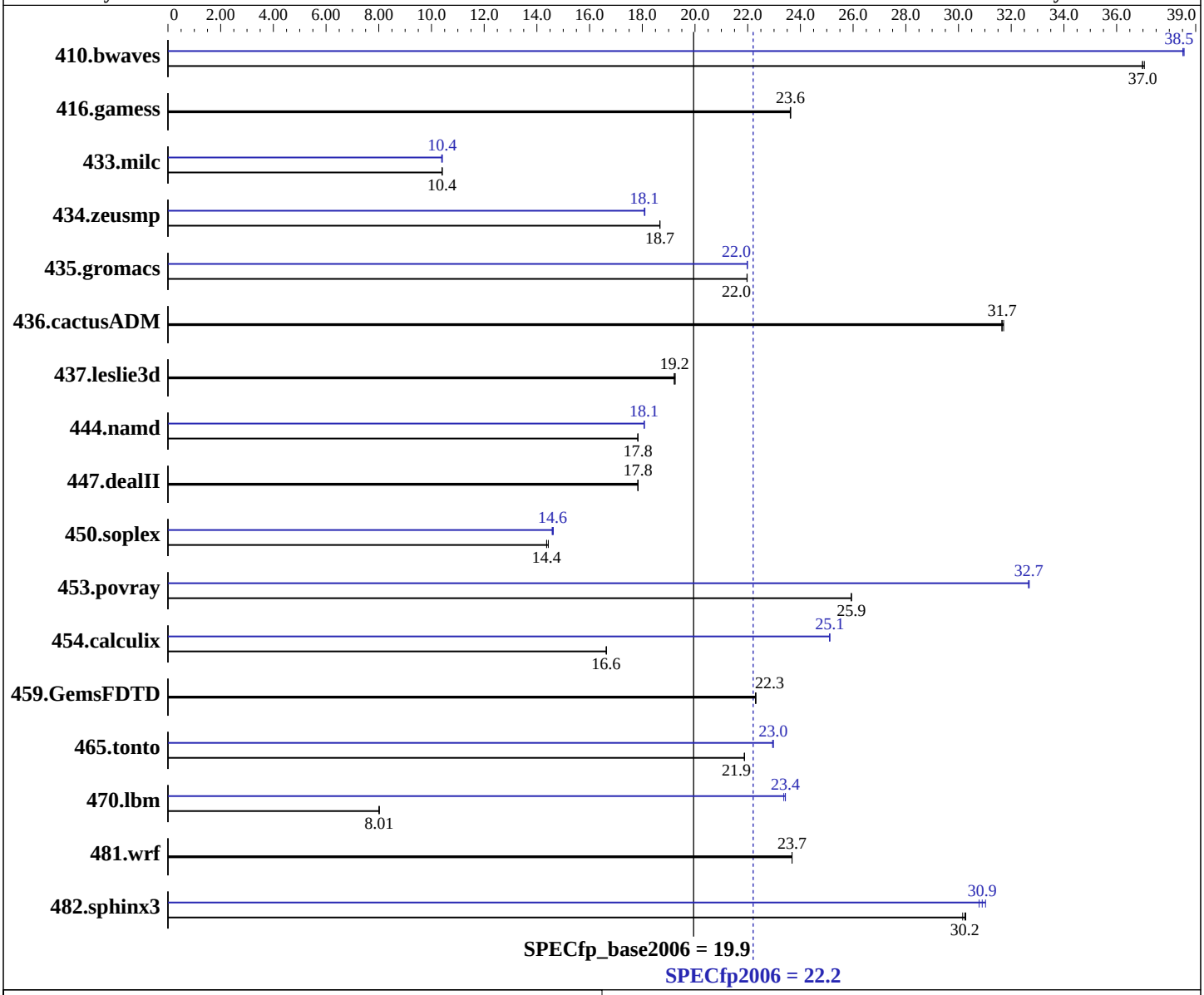
Dell Precision T7400 (Intel Xeon X5272, 3.40 GHz)

SPECfp®2006 = 22.2

SPECfp_base2006 = 19.9

CPU2006 license: 55
Test sponsor: Dell Inc.
Tested by: Dell Inc.

Test date: Dec-2007
Hardware Availability: Jan-2008
Software Availability: Nov-2007



Hardware

CPU Name:	Intel Xeon X5272
CPU Characteristics:	1600 MHz Bus Speed
CPU MHz:	3400
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/chip
CPU(s) orderable:	1,2 chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	6 MB I+D on chip per chip

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Software

Operating System:	Windows XP Professional x64 Edition SP2
Compiler:	Intel C++ Compiler for Intel 64, Version 10.1 Build 20070809 Package ID: w_cc_p_10.1.011 Intel Visual Fortran Compiler for Intel 64, Version 10.0 Build 20070809 Package ID: w_fc_p_10.1.011 Microsoft Visual Studio 2005 SP1
Auto Parallel:	Yes
File System:	NTFS

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L3 Cache: None
Other Cache: None
Memory: 8 GB (8x1 GB 800 MHz FB-DIMM CL5)
Disk Subsystem: 1 x 73 GB SAS 15K RPM
Other Hardware: None

System State: Default
Base Pointers: 32/64-bit
Peak Pointers: 32/64-bit
Other Software: MicroQuill SmartHeap Library 8.1 for x64

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	367	37.1	367	37.0	**367**	**37.0**	353	38.5	352	38.6	**353**	**38.5**
416.gamess	**829**	**23.6**	829	23.6	829	23.6	**829**	**23.6**	829	23.6	829	23.6
433.milc	**882**	**10.4**	882	10.4	883	10.4	**882**	**10.4**	882	10.4	884	10.4
434.zeusmp	488	18.7	487	18.7	**487**	**18.7**	**503**	**18.1**	503	18.1	503	18.1
435.gromacs	325	22.0	325	22.0	**325**	**22.0**	325	22.0	325	22.0	**325**	**22.0**
436.cactusADM	**377**	**31.7**	377	31.7	378	31.6	**377**	**31.7**	377	31.7	378	31.6
437.leslie3d	**489**	**19.2**	489	19.2	488	19.2	**489**	**19.2**	489	19.2	488	19.2
444.namd	450	17.8	450	17.8	**450**	**17.8**	444	18.1	444	18.1	**444**	**18.1**
447.dealII	**641**	**17.8**	641	17.8	642	17.8	**641**	**17.8**	641	17.8	642	17.8
450.soplex	**580**	**14.4**	578	14.4	580	14.4	570	14.6	572	14.6	**571**	**14.6**
453.povray	**205**	**25.9**	205	25.9	205	25.9	163	32.7	163	32.7	**163**	**32.7**
454.calculix	496	16.6	496	16.6	**496**	**16.6**	328	25.1	329	25.1	**329**	**25.1**
459.GemsFDTD	**476**	**22.3**	476	22.3	476	22.3	**476**	**22.3**	476	22.3	476	22.3
465.tonto	450	21.9	450	21.9	**450**	**21.9**	**428**	**23.0**	429	22.9	428	23.0
470.lbm	**1715**	**8.01**	1713	8.02	1715	8.01	586	23.4	588	23.4	**586**	**23.4**
481.wrf	472	23.7	472	23.7	**472**	**23.7**	472	23.7	472	23.7	**472**	**23.7**
482.sphinx3	646	30.2	**644**	**30.2**	644	30.3	**631**	**30.9**	628	31.0	633	30.8

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)

BIOS Settings
  Adjacent Cache Line Prefetch set to ON
```

Base Compiler Invocation

C benchmarks:

```
icl -Qstd=c99
```

C++ benchmarks:

```
icl
```

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Base Compiler Invocation (Continued)

Fortran benchmarks:
ifort

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

Base Optimization Flags

C benchmarks:
-fast -Qauto-ilp32 -Qparallel /F1000000000 shlw64mt.lib
libguide40.lib -link /FORCE:MULTIPLE

C++ benchmarks:
-fast -Qauto-ilp32 -Qparallel -Qcxx_features /F1000000000
shlw64mt.lib libguide40.lib -link /FORCE:MULTIPLE

Fortran benchmarks:
-fast -Qauto-ilp32 -Qparallel /F1000000000 libguide40.lib
-link /FORCE:MULTIPLE

Benchmarks using both Fortran and C:
-fast -Qauto-ilp32 -Qparallel /F1000000000 libguide40.lib
-link /FORCE:MULTIPLE

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: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32 -Qunroll2 -Oa /F1000000000 shlw64mt.lib libguide40.lib -link /FORCE:MULTIPLE

470.lbm: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32 -Qunroll2 -Qscalar-rep- -Qprefetch /F1000000000 shlw64mt.lib libguide40.lib -link /FORCE:MULTIPLE

482.sphinx3: -fast -Qauto-ilp32 -Qunroll2 /F1000000000 shlw64mt.lib libguide40.lib -link /FORCE:MULTIPLE

C++ benchmarks:

444.namd: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32 -Oa -Qcxx_features /F1000000000 shlw64mt.lib libguide40.lib -link /FORCE:MULTIPLE

447.dealII: basepeak = yes

450.soplex: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32 -Qparallel -Qcxx_features /F1000000000 shlw64mt.lib libguide40.lib -link /FORCE:MULTIPLE

453.povray: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32 -Qunroll4 -Qansi-alias -Qcxx_features /F1000000000 shlw64mt.lib libguide40.lib -link /FORCE:MULTIPLE

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Peak Optimization Flags (Continued)

Fortran benchmarks:

410.bwaves: `-fast -Qauto-ilp32 -Qparallel -Qprefetch /F1000000000 libguide40.lib -link /FORCE:MULTIPLE`

416.gamess: `basepeak = yes`

434.zeusmp: `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-QxT -O2 -Qprec-div- -Qunroll0 -Qscalar-rep- /F1000000000 libguide40.lib -link /FORCE:MULTIPLE`

437.leslie3d: `basepeak = yes`

459.GemsFDTD: `basepeak = yes`

465.tonto: `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-fast -Qauto-ilp32 -Qunroll4 -Qauto /F1000000000 libguide40.lib -link /FORCE:MULTIPLE`

Benchmarks using both Fortran and C:

435.gromacs: `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-fast -Qauto-ilp32 -Oa -Qprefetch /F1000000000 libguide40.lib -link /FORCE:MULTIPLE`

436.cactusADM: `basepeak = yes`

454.calculix: `-fast -Qauto-ilp32 -Qunroll-aggressive /F1000000000 libguide40.lib -link /FORCE:MULTIPLE`

481.wrf: `basepeak = yes`

The flags file that was used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/dell.ic10.1.windows.flags.20090714.01.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/dell.ic10.1.windows.flags.20090714.01.xml`

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