SPEC® CINT2006 Result

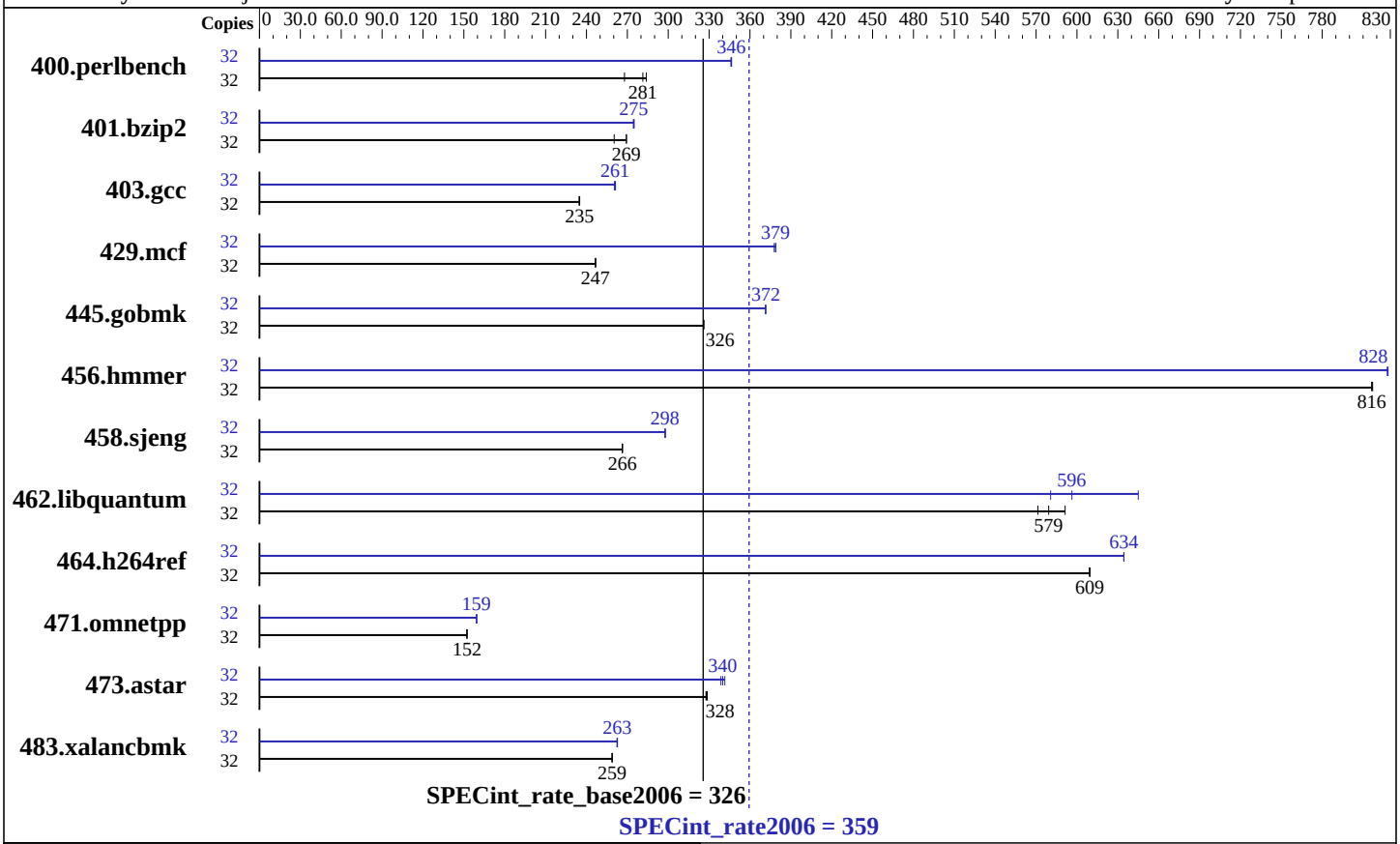
Fujitsu Limited
PRIMEQUEST 540

SPECint®_rate2006 = 359

SPECint_rate_base2006 = 326

CPU2006 license: 19
Test sponsor: Fujitsu Limited
Tested by: Fujitsu Limited

Test date: May-2007
Hardware Availability: Aug-2006
Software Availability: Apr-2007



Hardware

CPU Name:	Dual-Core Intel Itanium 2 9050
CPU Characteristics:	1.6GHz/24MB, 533MHz FSB
CPU MHz:	1600
FPU:	Integrated
CPU(s) enabled:	32 cores, 16 chips, 2 cores/chip
CPU(s) orderable:	1-16 chips
Primary Cache:	16 KB I + 16 KB D on chip per core
Secondary Cache:	1 MB I + 256 KB D on chip per core
L3 Cache:	12 MB I+D on chip per core
Other Cache:	None
Memory:	128 GB (128 x 1GB DDR2-533 DIMMs)
Disk Subsystem:	Fujitsu MAW3147NC (SCSI Ultra 320) x 2 147GB 10,025rpm, No RAID configuration
Other Hardware:	None

Software

Operating System:	Red Hat Enterprise Linux 5
Compiler:	Intel C++ Compiler for Linux 9.1 (Build 20061105)
Auto Parallel:	No
File System:	ext2
System State:	Single-user
Base Pointers:	64-bit
Peak Pointers:	32/64-bit
Other Software:	MicroQuill Smartheap 8.0

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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	32	**1111**	**281**	1167	268	1101	284	32	904	346	902	347	**903**	**346**
401.bzip2	32	**1147**	**269**	1186	260	1147	269	32	**1124**	**275**	1125	274	1123	275
403.gcc	32	**1096**	**235**	1098	235	1096	235	32	**987**	**261**	986	261	989	260
429.mcf	32	1183	247	1184	247	**1183**	**247**	32	773	378	770	379	**770**	**379**
445.gobmk	32	1030	326	1029	326	**1030**	**326**	32	**904**	**372**	903	372	904	371
456.hmmer	32	**366**	**816**	366	816	365	817	32	360	828	**361**	**828**	361	828
458.sjeng	32	1453	267	1454	266	**1454**	**266**	32	1300	298	1301	298	**1301**	**298**
462.libquantum	32	1161	571	1121	591	**1145**	**579**	32	1142	581	**1112**	**596**	1028	645
464.h264ref	32	1162	609	**1162**	**609**	1162	609	32	**1116**	**634**	1116	634	1116	634
471.omnetpp	32	1314	152	**1313**	**152**	1313	152	32	1255	159	1255	159	**1255**	**159**
473.astar	32	684	329	686	328	**685**	**328**	32	**661**	**340**	663	339	658	342
483.xalancbmk	32	853	259	**853**	**259**	853	259	32	841	262	840	263	**841**	**263**

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

General Notes

```
Processes are bound to CPUs using taskset.
limit stacksize unlimited
Memory system is in "Non Mirror Mode".
```

Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Base Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_IA64
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
445.gobmk: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX

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Base Portability Flags (Continued)

464.h264ref: -DSPEC_CPU_LP64
471.omnetpp: -DSPEC_CPU_LP64
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
-fast -IPF_fp_relaxed -ansi-alias

C++ benchmarks:
-fast -IPF_fp_relaxed -ansi-alias -Wl,-z,muldefs
/opt/SmartHeap_8/lib/libsmartheapC64.a
/opt/SmartHeap_8/lib/libsmartheap64.a

Peak Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

400.perlbench: -prof-gen(pass 1) -prof-use(pass 2) -fast -IPF_fp_relaxed
-mtune=itanium2-p9000 -inline-max-size=550
-inline-min-size=40

401.bzip2: -prof-gen(pass 1) -prof-use(pass 2) -fast -IPF_fp_relaxed
-auto-ilp32 -ansi-alias

403.gcc: -prof-gen(pass 1) -prof-use(pass 2) -fast -IPF_fp_relaxed
-auto-ilp32 -ansi-alias -opt-mem-bandwidth2

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Peak Optimization Flags (Continued)

429.mcf: -fast -IPF_fp_relaxed -auto-ilp32 -ansi
-inline-max-total-size=5000

445.gobmk: -prof-gen(pass 1) -prof-use(pass 2) -O2 -IPF_fp_relaxed
-static -ipo -auto-ilp32

456.hmmer: -fast -IPF_fp_relaxed -auto-ilp32

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -fast -IPF_fp_relaxed

462.libquantum: -fast -IPF_fp_relaxed -ansi-alias -auto-ilp32
-mtune=itanium2-p9000

464.h264ref: -fast -IPF_fp_relaxed -inline-max-size=100

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -O2 -IPF_fp_relaxed
-static -ipo -inline-max-per-routine=50 -Wl,-z,muldefs
/opt/SmartHeap_8/lib/libsmartheapC64.a
/opt/SmartHeap_8/lib/libsmartheap64.a

473.astar: -prof-gen(pass 1) -prof-use(pass 2) -O2 -static -ipo
-inline-max-size=5000 -Wl,-z,muldefs
/opt/SmartHeap_8/lib/libsmartheapC64.a
/opt/SmartHeap_8/lib/libsmartheap64.a

483.xalancbmk: -prof-gen(pass 1) -prof-use(pass 2) -O2 -static -ipo
-ansi-alias -Wl,-z,muldefs
/opt/SmartHeap_8/lib/libsmartheapC64.a
/opt/SmartHeap_8/lib/libsmartheap64.a

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Fujitsu.PQ580.ipf.linux.flags.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Fujitsu.PQ580.ipf.linux.flags.xml

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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