BogoMips mini-Howto

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Questo testo fornisce alcune informazioni circa i BogoMips, informazioni raccolte da varie fonti come newsgroups e e-mail. Questo testo può essere ottenuto dai vari archivi Linux in .../HOWTO/mini/BogoMips. Sono disponibili traduzioni (credo) in Giapponese, Italiano, Tedesco, Polacco e Portoghese dagli archivi appropriati. La presente traduzione italiana è stata curata da Nicola Pero, n.pero@mi.flashnet.it. Un articolo informativo, intitolato 'the Quintessential Linux Benchmark', è stato pubblicato nel Linux Journal, nel numero del Gennaio 1996. Nuovi voci del mini-Howto per CPU che non compaiono nell'elenco saranno molto apprezzate. Possono essere mandate via e-mail all'autore.

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1 Le più basse e le più alte stime di Bogomips

Le seguenti sono le più basse e le più stime di Bogomips, mi sono state riferite personalmente, o pubblicate su Usenet.

1.1 Il più basso valore di BogoMips durante una sequenza di boot di Linux

- Tim Van der Linden, `timvdl@innet.be`
- Intel 8088, a 4.77 MHz, ELKS
- 0.02 BogoMips

1.2 Il più alto valore di Bogomips durante una sequenza di boot di Linux con una singola CPU

- Ted E. Suter II, `nexion@home.com`
- AMD K6-2, a 450 MHz
- 901.12 BogoMips

1.3 Il più alto valore di Bogomips durante una sequenza di boot di Linux con CPU multiple

- Jeff White, `jwhite@ghq.com`
- Pentium MMX, 2 CPU, a 233 MHz
- 927.33 BogoMips

1.4 Il più alto valore di Bogomips non-Linux

- `omega@sequent.com`
- Sequent NUMA-Q, 32 CPU P6, a 180 MHz
- sistema operativo Dynix
- 3776.00 BogoMips

2 Che cosa sono i Bogomips

>Da una mail di Lars Wirzenius `wirzeniu@kruuna.Helsinki.FI` del 9 Settembre 1993, in cui spiega che cosa siano i Bogomips, con informazioni dettagliate addizionali di Alessandro Rubini, `rubini@norgana.systemy.it`, e di Wim van Dorst:

> 'MIPS è una abbreviazione per Milioni di Istruzioni Per Secondo. È una misura della velocità di calcolo di un programma. Come la maggior parte delle misure di questo tipo, è più spesso abusata che usata in modo appropriato (è molto difficile confrontare a ragione MIPS per diversi tipi di computer). I BogoMips sono una invenzione di Linus. Il kernel (o era un device driver?) ha bisogno di un loop di temporizzazione (il tempo è troppo breve e/o è necessaria troppa precisione rispetto a quanto possibile con un metodo di attesa senza busy loop), che deve essere calibrato per la velocità del processore della macchina. Perciò, il kernel misura al momento del boot quanto veloce un certo tipo di busy loop va su un computer. "Bogo" viene da "bogus", ovvero, qualcosa che è fasullo. Per cui, il valore dei BogoMips dà una qualche indicazione della velocità del processore, ma è davvero troppo poco scientifica per essere chiamata in modo diverso che BogoMips.
>
> Le ragioni (ce ne sono due) per cui è stampato durante il bootup è che a) aiuta un pochino il debugging e a controllare che la cache dei computer e il bottone del turbo funzionino, e b) Linus ama ridacchiare quando vede la gente confusa sulle news.'

I BogoMips vengono determinati in `/usr/src/linux/init/main.c` (un semplice algoritmo in C), e la variabile del kernel pertinente `loops_per_sec` è usata in parecchi driver per ragioni più serie. La effettiva funzione di delay `udelay()` è in assembler, e perciò ciascun port ha la sua propria definizione in `/include/asm/delay.h`. La variabile `loops_per_sec` e la funzione `udelay()` sono usate in numerosi drivers, vedi:

```
cd /usr/src/linux     # o dovunque si trovino i sorgenti
find . -name '*.[hcS]' -exec fgrep loops_per_sec {} /dev/null \;
find . -name '*.[hcS]' -exec fgrep udelay {} /dev/null \;
```

3 Come stimare quale dovrebbe essere la giusta valutazione dei BogoMips

>Da una iniziativa di Ian Jackson, `ijackson@nyx.cs.du.edu`, e Przemek Klosowski, molto aggiornata ed espansa da Wim van Dorst per i dati correnti, come listati sotto:

Come guida molto approssimativa, i BogoMips posso essere calcolati da:

Sistema	BogoMips	Confronto
Intel 8088	clock * 0.004	0.02
Intel/AMD 386SX	clock * 0.14	0.8
Intel/AMD 386DX	clock * 0.18	1 (definizione)
Motorola 68030	clock * 0.25	1.4
Cyrix/IBM 486	clock * 0.34	1.8
Intel Pentium	clock * 0.40	2.2
Intel 486	clock * 0.50	2.8
AMD 5x86	clock * 0.50	2.8
Mips R4000/R4400	clock * 0.50	2.8
Nexgen Nx586	clock * 0.75	4.2
PowerPC 601	clock * 0.84	4.7
Alpha 21064/21064A	clock * 0.99	5.5

Alpha 21066/21066A	clock * 0.99	5.5
Alpha 21164/21164A	clock * 0.99	5.5
Intel Pentium Pro	clock * 0.99	5.5
Cyrix 5x86/6x86	clock * 1.00	5.6
Intel Pentium II	clock * 1.00	5.6
Intel Celeron	clock * 1.00	5.6
Mips R4600	clock * 1.00	5.6
Alpha 21264	clock * 1.99	11.1
AMD K5/K6/K6-2	clock * 2.00	11.1
UltraSparc II	clock * 2.00	11.1
Pentium MMX	clock * 2.00	11.1
PowerPC 604	clock * 2.00	11.1
Motorola 68060	clock * 2.01	11.2

Notare che il ciclo che calcola i BogoMips non sfrutta appieno il parallelismo dei vari processori, come ad esempio quello dell'Intel Pentium e dell'Alpha 21164.

Notare che il ciclo che calcola i BogoMips per le CPU non-Intel è simile ma non è lo stesso.

4 Come determinare quale è la valutazione corrente dei BogoMips

Ci sono tre metodi per determinare i BogoMips correnti, cioè

1. guardare in `/proc/cpuinfo`, per esempio con ‘`cat /proc/cpuinfo`‘.
2. guardare nell'output del syslog per vedere che cosa è stato stampato là durante il boot (se necessario recuperando l'informazione esplicitamente con dmesg o syslogk) o
3. usando il programma a se stante bogomips.

Un alternativa non-determinativa, che è applicabile anche per sistemi non-Linux come i Cray e simili, può essere il programma a se stante BogoMips. Dal file `readme` di Jeff Tranter, `jeff_tranter@mitel.com`:

> ‘Stufo di fare un reboot del tuo sistema per poter vedere a quanti BogoMIPS sta correndo oggi? [...] ”Bogomips” è un programma standalone che visualizza le prestazioni del tuo sistema usando uno dei benchmark più riconosciuti del mondo. Usa lo stesso codice che è usato nel kernel di Linux durante il boot, ma funziona come un programma utente. [...] La versione 1.3 di BogoMIPs è ora portabile e dovrebbe andare in ogni sistema che supporta un compilatore e una libreria ANSI C.’

Notare che a causa del carico di sistema i valori calcolati con tale programma potrebbero essere più bassi di quanto registrato nell'elenco qui sotto. Intrinsecamente il programma standalone non può dare gli stessi risultati dei BogoMips della sequenza di boot, poiché il carico di sistema sarà in competizione con questo programma lanciato da un utente ordinario. Dunque sotto sono elencati solo valutazioni di BogoMips da sequenze di boot.

Attenzione che il file `sunsite.unc.edu:/pub/Linux/system/status/bogo-1.2.tar.gz/` contiene l'ultima versione 1.3 (sic), che tuttavia è piuttosto sorpassata.

5 Variazioni nelle valutazioni dei BogoMips

>Da Linus, `torvalds@cc.helsinki.fi`, la spiegazione delle variazioni che si possono avere nella valutazione dei BogoMips, in `comp.os.linux.development`, 28 Aprile 1994:

> 'Il loop che calcola i BogoMips è "quantizzato", così si trova quasi sempre esattamente lo stesso numero ogni volta. Di solito si ottengono numeri diversi solo se la velocità è proprio sul "limite", quando piccole variazioni (gli interrupt arrivano a momenti diversi ecc) lo faranno saltare da un valore all'altro.'

Se un kernel non è compilato specificamente per la CPU in questione, si possono anche avere delle variazioni (perfino grandi) della valutazione dei BogoMips, principalmente a causa di allineamenti non ottimali. Questo problema apparentemente può aversi solo sulle varie CPU x86 (Intel e cloni). Fortunatamente può essere facilmente risolto: ricompilando il kernel specificamente per la propria CPU.

Notare che l'algoritmo dei BogoMips, contrariamente alla credenza popolare, NON è cambiato significativamente attraverso le varie versioni del kernel.

6 BogoMips ... failed

Sezione suggerita da varie domande sulla rete e per mail privata, ad esempio, da parte di Lily, `lbliao@alumni.caltech.edu`, e di Pierre Frenkiel, `frenkiel@cdfap2.in2p3.fr`. Nel Marzo 1995 mi hanno chiesto:

> 'Quando faccio il boot di Linux ricevo il messaggio:
>
> ```
> Calibrating delay loop.. ok - 23.96 BogoMips
> failed
> ```
>
> Dove/perché ha fallito il calibrating delay loop [loop di calibrazione del ritardo]?'

Non ha fallito. Se avesse fallito il testo sarebbe stato

```
Calibrating delay loop.. failed
```

Ciò che probabilmente ha davvero fallito è stato il driver per qualche gadget che uno potrebbe non avere nella propria macchina. Subito dopo aver calcolato la valutazione dei BogoMips vengono inizializzati i device driver. Prima i device SCSI, quindi i device di Rete, etc. Ogni fallimento [nell'inizializzazione] viene doverosamente riportato. Degno di nota è il driver per la AHA152x. Altri effetti del fallimento di driver (e non del fallimento del calcolo dei BogoMips) sono crash di sistema, lunghe attese, e paralisi completa del sistema.

A partire dal Linux 1.2 molti messaggi di errore sono stati migliorati, per cui aggiornate il kernel almeno fino a quella versione per scoprire quale particolare driver è quello che fallisce.

7 A proposito delle CPU cloni (Cyrix, NexGen, AMD, etc)

Le CPU Cyrix tipo 486 hanno bisogno di software che attivi la cache, talvolta chiamato anche software BogoBoost. Le CPU Cyrix 5x86 e 6x86 possono avere i BogoMips drasticamente migliorati dal branch-prediction (opzione BIOS). Notare che il miglioramento delle performance potrebbe essere irrisorio. Ci sono parecchi pacchetti disponibili per calibrare le CPU Cyrix, come la patch bogoboost, cx5x86mod, e set6x86, tutti dagli archivi normali, in posti ovvi. È stato riferito che le CPU Cyrix 6x86 possono dare performance migliori quando il kernel è compilato con ottimizzazione per 486, invece che ottimizzato per Pentium.

Le CPU NexGen 386-enhanced, marcate come Nx586, sono listate come di tipo 386, poiché il fatto che abbiano performance simili a quelle delle macchine Pentium non è rilevante per i BogoMips.

Gli AMD 5x86, indicati anche come AMD 486DX5, sono macchine 486/33 quadruplicate. Sono del tutto in linea con le altre CPU 486. L'AMD K5 e il K6 sono CPU di tipo Pentium, con i loro propri moltiplicatori BogoMips.

8 Perché fare attenzione ai BogoMips

Lasciatemi aggiungere qua che ci sono solo due ragioni per prestare attenzione alla valutazione dei BogoMips che viene presentata al momento di fare il boot di Linux:

1. Per vedere se è nel giusto range per il particolare processore, la sua frequenza di clock, e la cache potenzialmente presente. Molte CPU sono prone a setup errati di
   - settaggio della memoria cache (write-back è sbagliato per i BogoMips, spesso riportati minori di 5; write-through è ok)
   - buttoni del turbo (devono essere ON)
   - cache fasulla emulata via software BIOS (cambiare in cache reale)
   - cose simili riguardanti cache e clock, spesso anche riguardanti il software BIOS
2. Per vedere se il tuo sistema è più veloce del mio. Naturalmente questo è completamente sbagliato, inaffidabile, mal fondato, ed estremamente inutile, ma tutti i benchmark soffrono di questo stesso problema. Per cui perché non usarlo? Questa stupidità inerente non ha mai fermato la gente dall'usare i banchmark, non è vero? :-)

Notare che usi più seri per i veri benchmark sono indirizzati nel Linux Benchmarking Howto di André D. Balsa.

9 Compilation di valutazioni

La tabella seguente dà alcune valutazioni di BogoMips riportate per vari sistemi (approssimativamente 1000 voci da parte di circa 800 persone diverse, più o meno da 50 paesi differenti). Notare che queste valutazioni sono dalla sequenza di boot effettiva di Linux, eccetto naturalmente per la sezione sui Sistemi Non-Linux.

9.1 Sistemi 386 configurati in modo strano o sbagliato

Sistema	BogoMips	Riferito da
386DX/16 387 nocache	0.57	H. Peter Anvin <hpa@nwu.edu>
386DX/25	0.82	P Wright <philip.wright@purplet.demon.co.uk>
386DX/25 nocache	1.03	Mark A. Horton <mahmha@crl.com>
386SX/16	1.5	Stefan Kromer <sk@galaxy.sunflower.sub.org>
386SX/16	1.6	Bill Davidsen <davidsen@tmr.com>
386SX/20	1.87	Paul C. Dulany <pcdulany@wam.umd.edu>
386SX/20	2.45	Roger Harkess <roger@visi.com>
386DX/25(?) 128c	6.03	Chuck Meo <meo@solbourne.com>
386DX/20	13	Ed Runnion <erunnio@hubcap.clemson.edu>

9.2 Normali Sistemi 386: SX, DX, Nexgen

Sistema	BogoMips	Riferito da
386SX/8 undercl	1.04	Andrew Costa <c_chaos@wahnapitae.on.ca>
386SX/12	1.78	Klaus Kettner <kk@sesom.de>
386SX/16	1.99	James Vahn <jvahn@short.circuit.com>
386SX/16 Packard Bell	2.05	<root@Belvedere\%hip-hop.suvl.ca.us>
386SX/16	2.09	David E. Fox <dfox@belvedere.sbay.org>
386SX/16	2.15	W Stevens <wgsteven@math.uwaterloo.co>
386SX/16	2.2	Lech Marcinkowski <puolalm@tekla.fi>
386SX/16	2.23	Andrew Bulhak <acb@yoyo.cc.monash.edu.au>
386SX/16	2.23	Steven M. Gallo <smgallo@cs.buffalo.edu>
386SX/16	2.34	Kevin Burtch <kburtch@pts.mot.com>
386SX/16 turbo	2.38	Andrew Haylett <ajh@gec-mrc.co.uk>
386SX/16 0c	2.43	Adam Clarke <adamc@loose.apana.org.au>
386SX/16	2.49	Waymon <waymon@pacifier.com>
386SX/20	2.7	Alex Strasheim <astrashe@nyx.cs.du.edu>
386SX/20	2.70	J.L. Brothers <brothers@halcyon.com>
386SX/20	2.89	Anders Stenback <stenback@hehe.com>
386SXL/25 AMD	2.9	Vaughan R. Pratt <pratt@sunburn.stanford.edu>
386SX/25 AMD 0c	3.06	K.J. MacDonald <kenny@festival.ed.ac.uk>
386SX/25 AMD	3.38	Hamish Coleman <hamish@zot.apana.org.au>
386SX/25 0c	3.52	Rogier Wolff <r.e.wolff@et.tudelft.nl>
386SL/25 Intel	3.57	S Harris <harris@teaching.physics.ox.ac.uk>
386SX/25 AMD	3.62	S Harris <harris@teaching.physics.ox.ac.uk>
386SXL/25 AMD 0c	3.71	David E.A. Wilson <david@cs.uow.edu.au>
386SX/33 Intel	4.06	Kenneth J. Hoover <ken@psuedvax.psu.edu>
386SX/33	4.71	Alexander Komlik <apkom@l.ukrcom.kherson.ua>
386SX/40 Intel 0c	6.03	Michael Kenyon <u3g12@keele.ac.uk>
386DX/16	2.49	Mike <mike@emgee.demon.co.uk>
386DX/20 Intel	3.0	Malcolm Reeves <reeves@rocky1.usask.ca>
386DX/20 Intel	3.08	Si. Harris <harris@teaching.physics.ox.ac.uk>
386DX/20 Nec Powermate	3.22	David J Dawkins <davidd@isl.co.uk>
386DX/20 Micronics	3.25	M Haardt <u31b3hs@informatik.rwth-aachen.de>
386DX/20	3.67	Joost Helberg <jhelberg@nlsun8.oracle.nl>
386DX/25	3.91	Ian McCloghrie <imcclogh@cs.ucsd.edu>
386DX/25	3.95	Grant Edwards <grante@aquarius.rosemount.com>
386DX/25 0cache	3.96	J.O. Williams <jow@techbase.com>
386DX/25 32cache	4.53	J.M.A. Lahtinen <jmalahti@klaava.Helsinki.FI>
386DX/33	5.86	Tim Lacy <timla@microsoft.com>
386DX/33 64cache	5.99	Lars Wirzenius <wirzeniu@kruuna.Helsinki.FI>
386DX/33 Intel	5.99	Harri Pasanen <hpasanen@cs.hut.fi>
386DX/33 no387	6.03	Joel B.Levin <levin@bbn.com>
386DX/33 387	6.03	Peter Bechtold <peter@fns.greenie.muc.de>
386DX/40	6.21	J.L. Brothers <brothers@halcyon.com>
386DX/33	6.46	Dennis Robinson <djrobins@uxa.cso.uiuc.edu>
386DX/33	6.5	Dean Nelson <deannelson@aol.com>
386DX/33 387 256cache	6.65	Wim van Dorst <baron@clifton.hobby.nl>
386DX/33	6.65	Rick Lim <ricklim@opus.freenet.vancouver.bc.ca>

386DX/33	6.7	Craig Hagan <hagan@cih.com>
386DX/40	6.99	Ken Wilcox <wilcox@math.psu.edu>
386DX/40 AMD	7.76	Joe Phillips <rchandra@letter.com>
386DX/40 AMD	7.10	Kerry Person <kperson@plains.NoDak.edu>
386DX/40	7.10	D. Bikram Singh <a336dhal@cdf.toronto.edu>
386DX/40 128cache	7.23	Julian Francis Day <jfd0@aber.ac.uk>
386DX/40 bogoboosted	7.23	Pat St Jean <stjean@math.enmu.edu>
386DX/40 AMD 128cache	7.23	R.Bergs <rabe@akela.informatik.rwth-aachen.de>
386DX/40 slow DRAM	7.26	John Lockwood <lockwood@pan.vlsi.uiuc.edu>
386DX/40 128c	7.29	Karsten Friese <ftdkafr@ftd.ericsson.se>
386DX/40	7.29	E.C. Garrison <ericg@nickel.ucs.indiana.edu>
386DX/40	7.29	Darin Cowan <cowan@rubicon.org>
386DX/40	7.29	Bonne van Dijk <bonne@cs.utwente.nl>
386DX/40 AMD	7.76	Todd Lindner <tlindner@panix.com>
386DX/40	7.76	Bear Giles <bear@indra.com>
386DX/40 AMD 387 64c	7.91	<wires@gnu.ai.mit.edu>
386DX/40	7.98	Frank Pilhofer <fp@informatik.uni-frankfurt.de>
386DX/40 64c	7.98	Dean Junk <dpjunk@mm.com>
386DX/40 AMD 32c	7.98	Tommy Olsen <tommyo@ifi.uio.no>
386DX/40 AMD	7.98	James Reith <reith@racores.com>
386DX/40	7.98	Aaron T. Baldie <atb@u.washington.edu>
386DX/40 128c	7.98	John Pate <jpate@easynet.co.uk>
386DX/40	7.98	Christian Nelson <cnelson@csugrad.cs.vt.edu>
386DX/40	7.98	Alan Peckham <peckham@drei.enet.dec.com>
386DX/40	8.06	Michael Guslick <michaelg@alpha2.csd.uwm.edu>
386DX/40	8.06	Richard Brown <brown@midget.towson.edu>
386DX/40	8.06	Bill G. Bohling <bs146@tali.uchsc.edu>
Nx586/90 NexGen	67.44	<root@wgw.mnsinc.com>
Nx586/90 NexGen	67.44	Robert Gehring <rag@cs.tu-berlin.de>
Nx586/90 NexGen	67.48	David G. Eckard <dgeckard@eos.ncsu.edu>
Nx586/100 NexGen	74.34	Cameron L. Spitzer <cls@truffala.sj.ca.us>
Nx586/100 NexGen 256c	74.56	Marius Groenendijk <marius@cray-systems.lu>
Nx586/110 NexGen 256c	81.51	Michael J. Micek <mmicek@muddcs.cs.hmc.edu>
Nx586/110 NexGen	81.51	Ron Marsh <rmarsh@plains.nodak.edu>

9.3 Sistemi 486 configurati in modo strano o sbagliato

Sistema	BogoMips	Riferito da
486DX/33 0c	1.45	Mark Gray <vatavian@gvu1.gatech.edu>
486SL/25 0c	1.95	Paraskevas Evripidou <skevos@seas.smu.edu>
486DLC/40 0c	2.45	S.Schendel <sschend@magnus.acs.ohio-state.edu>
486DX/33 128c	2.94	P.J. Nefkens <p.nefkens@student.utwente.nl>
486DX4/120 AMD	3.04	Andrew Steinbach <stei0113@maroon.tc.umn.edu>
486DX5/133 AMD	3.05	Eric Hagen <ehagen@hawaii.edu>
486DX4/100 Cyrix	3.06	Stuart Harvey <sharvey@primenet.com>
486DX5/133 AMD	3.06	Charles Galpin <chg@severn.wash.inmet.com>
486DX4/100	3.06	Bear Giles <bear@indra.com>
486DX2/80	3.08	Gerald E. Butler <gbutler@phoenix.kent.edu>
486DX4/120 AMD	3.08	Charles Hines <chuck_hines@vnet.ibm.com>

486DX4/66 256c	3.10	Riccardo Capella <mc8508@mclink.it>
486DX4/100 wb-cache	3.10	Paul Close <pdc@sgi.com>
486DX4/120	3.13	Brian Perkins <bperkins@netspace.com>
486DX4/120 AMD	3.15	<eruston@net2.intserv.com>
486DX4/100	3.17	Thomas Sudbrak <sudbrak@borneo.gmd.de>
486SLC2/50 Cyrix	3.30	Colin J. Wynne <cwynne@sage.wlu.edu>
486DX/33	3.61	Marten van de Laan <marten@cs.rug.nl>
486DX/33 noturbo	3.61	Dimitris Evmorfopoulos <devmorfo@mtu.edu>
486DX4/120	3.74	Brian Wheeler <bdwheele@indiana.edu>
486DX4/120 AMD	3.74	Frank Pilhofer <fp@informatik.uni-frankfurt.de>
486DX4/100 Cyrix 256c	4	Joel Kelso <joel@cs.murdoch.edu.au>
486DX/33 256c noturbo	4.25	Wouter Liefting <wlieftin@cs.vu.nl>
486DX/33	4.66	Mark Gray <vatavian@gvu1.gatech.edu>
486Rx2 Cyrix 25/50	4.85	<cosc19v2@menudo.uh.edu>
486SX/33 noturbo	5.21	Scott D. Heavner <sdh@fishmonger.uucp>
486DX2/66 overdrive	5.37	Jeremy Orr <jeremy@careercenter.sfsu.edu>
486DX/33	5.66	Ryan Tucker <rtucker@ttgcitn.com>
486DX2/66	5.88	P.J. Nefkens <p.nefkens@student.utwente.nl>
486DX4/100	5.94	Howard Goldstein <hg@n2wx.ampr.org>
486DX4/100 AMD	5.94	Mr Pink <vince@dallas.demon.co.uk>
486DX4/100 notebook	6.55	Thomas <tom@dirac.physik.uni-konstanz.de>
486DX4/100 notebook	6.55	Hugh McCurdy <hmccurdy@ix.netcom.com>
486SLC Cyrix	7	Pieter Verhaeghe <pive@uia.ac.be>
486SX/33	7.84	Paul Hedderly <prh6@unix.york.ac.uk>
486DLC/40	7.98	Wil Cromer <nwc2@Ra.MsState.Edu>
486DX/33 256c	8.27	Rohan Tronson <rohan@kihi.com.au>
486DX4/100	11.11	NN <usenet@uxmail.ust.hk>
486DX4/100	11.3	Earl Gooch <egooch@mc.com>
486/66 Cyrix	13.02	Mike Baptiste <baptiste@bnr.ca>
486SLC2/25	14.6	Vaughan R. Pratt <pratt@Sunburn.Stanford.EDU>
486DX2/66 laptop	14.46	Robert Knop <rknop@netcom.com>
486SLC2/66	18.94	<root@avalon.net>
486DX/33 turbo	19.98	C Vetter <cbvetter@informatik.th-darmstadt.de>
486DX4/75	21.5	Theo Scott <rkwtgs@pukrs3.puk.ac.za>
486DX4/75	24.13	Sherman Hsieh <shieh@csua.berkeley.edu>
486DX2/58	26.3	Vassili Leonov <leonov@iedv7.acd.com>
486DX4/100 overclock	28.67	Theo Scott <rkwtgs@pukrs3.puk.ac.za>
486DX2/80	36	Mark Lee <mlee@heartlab.rri.uwo.ca>
486DX2/80	50.08	Mark Lee <mlee@heartlab.rri.uwo.ca>
486DX4/100	60	Sebastien Dedieu <dedieu@emi.u-bordeaux.fr>
486DX2/100 overclock	60.45	Tony D Shan <tdsst9+@pitt.edu>
486DX5/133 AMD	75.40	Jeff Hyche <jwhyche@scott.net>
486DX5/133 AMD	80.08	NN <guesta@slip-29-7.ots.utexas.edu>
486DX5/133 AMD	87	John Wiggins <jwiggins@comp.uark.edu>

9.4 Normali Sistemi 486

Sistema	BogoMips	Riferito da
486SX/20 DECpc	9.98	Thomas Pfau <pfau@cnj.digex.com>
486SX/25	12.24	M. Buchenrieder <mibu@scrum.greenie.muc.de>

486SX/25	12.3	Darren McKay <e9bh@unb.ca>
486SX/25	12.42	Mark R. Lindsey <mlindsey@nyx.cs.du.edu>
486DX/25	12.5	Phillip Hardy <phillip@mserve.kiwi.gen.nz>
486SX/25	12.52	Emmanual Emore <emor7672@elan.rowan.edu>
486DX/33 256c	16.33	Eric Kemminan <ekemmina@pms709.ms.ford.com>
486DX/33	16.35	Christopher L. Morrow <cm43@andrew.cmu.edu>
486DX/33	16.43	Rob Janssen <pe1chl@amsat.org>
486DX/33 64cache	16.44	H. Peter Anvin <hpa@nwu.edu>
486DX/33 256c DIY	16.44	Wouter Liefting <wlieftin@cs.vu.nl>
486DX/33 Intel 128c	16.44	Rafal Kustra <g1krakow@cdf.toronto.edu>
486DX/33	16.5	Alex Freed <freed@europa.orion.adobe.com>
486DX/33	16.6	Vaughan R. Pratt <pratt@Sunburn.Stanford.EDU>
486DX/33 noturbo	16.61	C Vetter <cbvetter@informatik.th-darmstadt.de>
486DX/33	16.61	Jeffrey L. Newbern <jnewbern@athena.mit.edu>
486DX/33	16.61	Giuseppe De Marco <gdemarco@freenet.hut.fi>
486DX/33	16.61	M Heuler <heuler@informatik.uni-wuerzburg.de>
486DX/33	16.61	Frank Lofaro <ftlofaro@unlv.edu>
486SX/33	16.64	Jacob Papenfuss <webmaster@the-corridor.com>
486DX/33	16.77	Donald Lewis <dlewis@jackson.freenet.org>
486DX/33	16.77	Stephan Boettcher <staphan@alzt.tau.ac.il>
486DX/33 256c	16.77	David Manchester <mustang@tartarus.uwa.edu.au>
486DX/40	19.8	Jose Calhariz <cal@minerva.inesc.pt>
486DX/40	19.91	M Heuler <heuler@informatik.uni-wuerzburg.de>
486DX/40	19.96	David A. Ranch <dranch@ecst.csuchico.edu>
486DX/40 AMD	19.97	M Haardt <u31b3hs@informatik.RWTH-Aachen.DE>
486DX/40 Intel	19.97	Paul van Spronsen <vspr@teppic.sun.ac.za>
486DX/40	19.97	Ulf Tietz <ulf@rio70.bln.sni.de>
486DX/40	19.97	<Eberhard_Moenkeberg@p27.rollo.central.de>
486DX/40	19.97	Zoltan Lajber <lajbi@lajli.gau.hu>
486DX/40	19.97	Wim van Dorst <baron@wiesje.hobby.nl>
486DX/40 AMD	20	Chuck Munro <chuckm@canada.hp.com>
486DX/40 AMD	20.09	Pieter Eendebak <peendebak@bbsw.idn.nl>
486DX/50	24.48	Arnd Gehrmann <arnd@rea>
486DX/50 AMD	24.85	Klaas Hemstra <hst@mh.nl>
486DX/50 DTK	24.85	Randolph Christophers <randyc@lna.oz.au>
486DX/50	24.85	Kevin Lentin <kevinl@bruce.cs.monash.edu.au>
486DX2/50	24.85	Jason Matthew <jmatthew@kn.pacbell.com>
486DX2/50	24.85	Gregory P. Smith <smithgr@cs.colorado.edu>
486DX/50 VLB	24.97	Tom Miller <tvtom@en.com>
486DX/50	24.99	Jeff <css@erols.com>
486DX/50 Intel 256c	24.99	Mike <mike@emgee.demon.co.uk>
486DX/50	25	Robert Herzog <rherzog@rc1.vub.ac.be>
486DX2/50	25	M. Abrahamsson <swmike@uplift.df.lth.se>
486DX2/50	25.0	Christian Holtje <choltje@ux1.cso.uiuc.edu>
486DX2/50 DECpc	25.04	Thomas Pfau <pfau@cnj.digex.com>
486DX2/50 Eisa	25.04	John Willing <willing@cimage.com>
486DX2/50 256c	25.04	Zhou Yanmo <zhou@gauss.math.usf.edu>
486DX/50	25.04	Michael Kress <kress@hal.saar.de>
486DX2/50	25.04	Mats Wikholm <mwikholm@news.abo.fi>
486DX2/50	25.04	Jean C Delepine <delepine@linux.u-picardia.fr>

486DX/50	25.04	Jean C Delepine <delepine@linux.u-picardia.fr>
486DX/50	25.04	Kevin Burtch <kburtch@pts.mot.com>
486DX/50 notebook	25.04	Pierre Frenkiel <frenkiel@cdfap1.in2p3.fr>
486DX/50	25.10	M Heuler <heuler@informatik.uni-wuerzburg.edu>
486DX2/50	25.4	Brian Kennedy <bkenned@hubcap.clemson.edu>
486DX2/66	32	Lee Sau Dan <h9210876@khuxa.hku.hk>
486DX2/66	32.9	Frederick <niles@axp745.gsfc.nasa.gov>
486DX2/66	33	Alec Muffett <alecm@uk-usenet.uk.sun.com>
486DX2/66	33	NN <coolefa@pmifeg.com>
486DX2/66	33	Steve Tinney <sjt@enlil.museum.upenn.edu>
486DX2/66 Intel	33	Chuck Munro <chuckm@canada.hp.com>
486DX2/66 VLB	33.0	Sebastien Dedieu <dedieu@emi.u-bordeaux.fr>
486DX2/66 AMD	33.05	G. Skinner <gskinner@gwsunix1.crystalball.com>
486DX2/66 VLB	33.18	Pablo Iranzo Gomez <iranzop@gong.ci.uv.es>
486DX2/66 VLB	33.18	Dag Wieers <dag@digibel.be>
486DX2/66	33.20	Arnd Gehrmann <arnd@rea.com>
486DX2/66 Intel/PCI	33.22	C. Menke <carsten.menke@post.uni-bielefeld.de>
486DX2/66	33.22	Brian Ricker <gt2327c@prism.gatech.edu>
486DX2/66	33.22	Don Bennett < <don@engr.mun.ca>
486DX2/66	33.22	Robert Heller <heller@cs.umass.edu>
486DX2/66	33.22	Warwick Ward-Cox <wwar@lostlink.alt.za>
486DX2/66	33.22	Chien-An Chen <giant@nwu.edu>
486DX2/66 Eisa/VL	33.22	Serge <sviznyuk@magnus.acs.ohio-state.edu>
486DX2/66 AMD	33.22	Wayne Robinson <wayner@renoir.cftnet.com>
486DX2/66 Intel	33.22	Jim Barber <yeul@marsh.cs.martin.edu.au>
486DX2/66	33.22	Tom Lowery <tlowery@mcs.kent.edu>
486DX2/66	33.27	S Viznyuk <sviznyuk@magnus.acs.ohio-state.edu>
486SX2/66	33.28	Jacob Papenfuss <root@the-corridor.com>
486DX2/66	33.3	Devon Tuck <devon@netcom.com>
486DX2/66 256cache	33.4	H. Peter Anvin <hpa@nwu.edu>
486DX2/66	33.5	Jongyoon Lee <mr2@netcom.com>
486DX2/66	33.5	Petrovsky Alexey <gong@cs.msu.su>
486DX2/66	33.5	Sung Lee <slee2@umbc.edu>
486DX2/66	33.55	Gene McCulley <mcculley@greatwall.cctt.com>
486DX2/66	33.55	W. Zeilinger <wzeil@doradus.ast.univie.ac.at>
486DX2/66	33.55	Donald Lewis <dlewis@jackson.freenet.org>
486DX2/66	33.55	Eric Malkowski <malk@world.std.com>
486DX2/66 0c	33.55	Chris Petit <mystere@ix.net.com>
486DX2/66	33.55	<al-b@minster.york.ac.uk>
486DX2/66	33.55	Jesper de Jong <jesper@cas.et.tudelft.nl>
486DX2/66	33.55	John Paul Morrison <jmorriso@bogomips.com>
486DX2/66	33.55	Arash <ei39594@ios.chalmers.se>
486DX2/66	33.55	Ralph Lewis <rlewis@mail.wsu.edu>
486DX2/66	33.55	Ulisses Alonso Camaro <alonso@bebe.uv.es>
486DX2/66	33.55	Bussmann <bussmann@wolpi.infomatik.uni-bonn.de>
486DX2/66 Intel/PCI	33.55	Louis J. LaBash <labash@lcjones.aclib.siue.edu>
486DX2/66 Intel	33.55	Andrew Tubbiolo <enigma@seds.lpl.arizona.edu>
486DX2/66	33.55	W Fink <werner.fink@physik.uni-stuttgart.de>
486DX2/66 ICL	33.55	Mathias Koerber <mathias@solomon.technet.sg>
486DX2/66	33.55	Bill Pogue <gwp@dithots.dithots.org>

486DX2/66 256c	33.58	Theo Scott <rkwtgs@pukrs3.puk.ac.za>
486DX2/66	33.7	C Triantafillou <triant@pegasus.montcleair.edu>
486DX2/66 256c Intel	33.81	S Harris <harris@teaching.physics.ox.ac.uk>
486DX2/66	33.9	Magnus Back <erambk@eraj.ericsson.se>
486DX2/66 notebook	33.9	Robert A Knop <rknop@mop.caltech.edu>
486DX2/66	34.06	Al Clark <aclark@netcom.com>
486DX4/75	37.47	G Asmundarson <grettir@wordperfect.com>
486DX2/80	39.93	Andrew Tubbiolo <enigma@seds.lpl.arizona.edu>
486DX2/80 overcl/66	39.94	Mario L. Guttierez <mgutier@mentor.sdu.edu>
486DX2/80 AMD	39.94	Corey D Brenner <brenner@umr.edu>
486DX2/80	39.94	Dan Delaney <cgdela01@homer.louisville.edu>
486DX2/80	39.94	D t Haar <danny@caution.cistron.nl.mugnet.org>
486DX2/80 overcl	39.94	Peter Suetterlin <ps@kis.uni-freiburg.de>
486DX2/80 AMD	39.94	JL Gomez <kitana!sysop@caprica.com>
486DX2/80 AMD	39.94	Pete Krawczyk <pkrawczy@uiuc.edu>
486DX2/80 AMD	40	Rene Baart <baart@simplex.nl>
486DX2/80 AMD	40	Wolfgang Kalthoff <wo@rio70.bln.sni.de>
486DX2/80	40.0	Rick Brown <ccastrb@prism.gatech.edu>
486DX2/80 AMD	40.14	Jon Lewis <jlewis@inorganic5.chem.ufl.edu>
486DX2/80 AMD	40.14	Richard S. Stone <rstone@edgp.com>
486DX2/80	40.15	Oleg <oleg@hpcms.co.il>
486DX2/80 AMD	40.18	Adri Verhoef <a3@a3.xs4all.nl>
486DX2/80	40.18	Mats Andtbacka <mandtback@abo.fi>
486DX2/100 AMD overcl	49.14	Jon Lewis <jlewis@inorganic5.chem.ufl.edu>
5x86/100 AMD undercl	49.66	NN <root@tailor.aleim.net>
486DX4/100	49.66	Pete Cervasio <cervasio@airmail.net>
486DX4/100 256c	49.71	Lutz Pressler <lutz.pressler@med-stat.GWDG.de>
486DX4/100	49.71	Brett Gersekowski <bgrerseko@powerup.com.au>
486DX4/100 Intel 256c	49.77	Angelo Haritsis <ah@doc.ic.ac.uk>
5x86/100 AMB undercl	49.77	Bernd Hentig <bernd.hentig@guug.de>
486DX4/100	49.78	Aurel Balmosan <aurel@xylo.owl.de>
486DX4/100	49.87	Chris Saia <minkie@concentric.net>
486DX4/100	49.87	Aaron Brick <abrick@dcc.uchile.cl>
486DX4/100	50	Donald Lewis <dlewis@jackson.freenet.org>
486DX4/100	50.02	Peter Skov Knudsen <gogol@ask.diku.dk>
486DX4/100	50.02	Shadow Weaver <djamison@students.wisc.edu>
486DX4/100 AMD	50.3	Dave <shodan@shodan.clark.net>
486DX4/100 AMD	50.04	Tony Smolar <asmolar@fast.net>
486DX4/100	50.05	fredk <fredk@shadow.net>
486DX4/100	50.06	Ronald Prague <ronp@fisnet.net>
486DX4/100	50.08	Matt Gisher <matt@matt.fidalgo.net>
486DX4/100	50.08	Steven A. Duchene <sduchene@cis.ysu.edu>
486DX4/100	50.08	Miles O'Neal <meo@schoneal.com>
486DX4/100	50.08	Will <zxmvg07@hp12.zdv.uni-tuebingen.de>
486DX4/100	50.08	Piet de Bondt <bondt@dutiws.twi.tudelft.nl>
486DX4/100 laptop	50.08	Karl Kleinpaste <karl_kleinpaste@cs.cmu.edu>
486DX4/100 256c	50.08	Thomas Kanschik <y0000997@ws.rz.tu-bs.de>
486DX4/100	50.08	Linas Vepstas <linas@fc.net>
486DX4/100	50.08	Ed Daiga <daiga@engin.umich.edu>
486DX4/100 notebook	50.08	Gerry Quejada <fd863@cleveland.freenet.edu>

486DX4/100 AMD	50.08	B Schuller <schuller@ind136a.wi.leidenuniv.nl>
486DX4/100	50.08	J.L. Brothers <brothers@halcyon.com>
486DX4/100	50.08	David E.A. Wilson <david@cs.uow.edu.au>
486DX4/100	50.08	Mark Lumsden <root@titan2.physics.mcmaster.ca>
486DX4/100	50.08	Ashar <ashar@netcom12.netcom.com>
486DX4/100	50.08	Jacob Waltz <waltz@pcjiw.lampf.lanl.gov>
486DX4/100	50.08	Tom Sinclair <sinner@cafe.net>
486DX4/100 AMD	50.08	G. Skinner <gskinner@gwsunix1.crystalball.com>
486DX4/100 AMD	50.08	Nick Savoiu <nick@ritz.mordor.com>
486DX4/100	50.08	Thomas J Fisher <twb5odt@nmia.com>
486DX4/100	50.08	Pascal Pensa <pensa@aurora.unice.fr>
486DX4/100	50.08	Julian Bradbury <julian@xabcs.demon.co.uk>
486DX4/100	50.51	Frederic Potter <frederic@swing.ibp.fr>
486DX4/100	50.66	Bill Stegers <bill_ste@zeelandnet.nl>
486DX4/120 256c	59.1	Kevin <kalichwa@oakland.edu>
486DX4/120 AMD	59.80	Mark Tranchant <mat92@ecs.soton.ac.uk>
486DX4/120 AMD	59.80	Fred Broce <fbroce@atlanta.com>
486DX4/120 AMD	59.90	Marko Ovaska <ovaska@cc.helsinki.fi>
486DX4/120 AMD	59.80	Bob Purdon <bobp@mpx.com.au>
486DX4/120 AMD	59.80	Pat Young <dice@netbsd.warped.com>
486DX4/120	59.91	Will <zxmvg07@hp12.zdv.uni-tuebingen.de>
486DX4/120 AMD 256c	60.01	Angelo Haritsis <ah@doc.ic.ac.uk>
486DX4/120 overcl	60.45	Pascal Pensa <pensa@aurora.unice.fr>
486DX4/120	60.45	Neal Howard <neal@metronet.com>
486DX4/120 AMD	60.45	Oscar Belmar Madrid <obelmar@anakena.usach.cl>
486DX4/120	60.45	Jason Buchanan <jsb@digistar.com>
486DX4/120	60.45	Foersterling <dirk@informatik.uni-frankfurt.de>
486DX4/120	60.45	Bernd Hentig <bernd@finow.snafu.de>
5x86/133 AMD	66.15	NN <root@tailor.aleim.net>
5x86/133 AMD	66.15	Brad Wilson <bwilson@deltanet.com>
5x86/133 AMD	66.15	Paul S. Doyle <paul.doyle@mci.com>
5x86/133 AMD	66.44	P Yli-Krekola <perttu@ntcmar01ba.ntc.nokia.com>
5x86/133 AMD	66.44	V. Tailor <vtailor@ibm.net>
5x86/133 AMD	66.55	Andrew B. Cramer <cramer@ripco.com>
5x86/133 AMD	66.56	Bob Nielsen <nielsen@primenet.com>
5x86/133 AMD	66.65	Geoff Raye <gtraye@igsrsparc2.er.usgs.gov>
5x86/133 AMD	66.7	Klaas Hemstra <hst@mh.nl>
5x86/133 AMD	66.80	N.N. <vp24njcb@ubvms.cc.buffalo.edu>
5x86/133 AMD 256c	67.10	Vasily Lewis
5x86/133 AMD	67.10	James Reith <reith@racores.com>
5x86/133 AMD 256c	67.10	Yves Rougy <yrougy%siam@cal.fr>
5x86/133 AMD 256c	67.10	Peter A. Koren <pkoren@lvdc20.dseg.ti.com>
5x86/133 AMD 256c	67.10	Wim Joppe <joppe@xs4all.nl>
5x86/133 AMD 256c	67.10	Gunnar Stefansson <gunnars@rhi.hi.is>
5x86/133 AMD 256c	67.10	Vernard Martin <vernard.martin@cc.gatech.edu>
5x86/150 AMD overcl	74.75	Sergio Riveros <riveros@musca.unm.edu>
5x86/150 AMD overcl	74.75	Arthur K. Chan <artchan@cs.ucr.edu>
5x86/160 AMD overcl	79.87	M.Suencksen <msuencks@techfak.uni-bielefeld.de>
5x86/160 AMD overcl	79.87	J. Chris Hammond <cosmo@pcisys.net>
5x86/160 AMD overcl	79.87	Bird Chen <luca@linux.taiwan.hp.com>

5x86/160 AMD overcl	79.89	Geir Skaugen <geir.skaugen@energy.sintef.no>
5x86/160 AMD overcl	79.89	Martin Vernon <martin@gw6hva.demon.co.uk>
5x86/160 AMD overcl	79.92	T. Zerucha <zerucha@shell.portal.com>
5x86/160 AMD overcl	80.36	Paul Colucci <pcolucci@acsu.buffalo.edu>
5x86/160 AMD overcl	80.36	Steinar Haug <sthaug@nethelp.no>
5x86/160 AMD overcl	80.36	James Daniel <triadmin@bga.com>
5x86/160 AMD	80.36	David H.S. Oh <david@std.net>

9.5 Variazioni sui normali 486: Cyrix/IBM, UMC

Sistema	BogoMips	Riferito da
486DLC/33	9.42	Dennis Robinson <djrobins@uxa.cso.uiuc.edu>
486DLC/33 387DX/40	9.47	Denis Solaro <drzob@vectrex.login.qc.ca>
486DLC/33 Cyrix wb	9.5	M. Asplund <matt@xenon.cchem.berkely.edu>
486DLC/33 Cyrix 386	11.2	Alex Freed <freed@europa.orion.adobe.com>
486DLC/40 256c	11.33	Schendel <sschend@magnus.acs.ohio-state.edu>
486Dx/40 Cyrix	11.73	Malcolm Bremer <malcolm@strw.LeidenUniv.nl>
486DRx2/40 Cyrix	13.10	Christopher Lau <clau@acs.ucalgary.ca>
486DX/33 Cyrix	13.21	M Haardt <u31b3hs@informatik.RWTH-Aachen.DE>
486DLC/40 bogoboost	13.21	Harry Pasanen <ps@tekla.fi>
486DLC/40 487 Cyrix	13.21	Ian A. Verschuren <iav@po.CWRU.Edu>
486DCL Cyrix	13.3	Tracer Bullet P.I. <ges@earth.baylor.edu>
486DLC/40	13.31	Adam Frampton <frampton@access2.digex.net>
486DLC/40	13.31	Rick Chow <crc@cacs.usl.edu>
486SLC-S/33	13.51	Brad Pepers <pepersb@cuug.ab.ca>
486DLC/40 no Cxpatch	15.47	Sergei O. Naoumov <serge@envy.astro.unc.edu>
486DLC/40 TI 128c	15.97	Philip K. Roban <phil@seal.micro.umn.edu>
486DLC/40 Cyrix	15.97	L.J. LaBash <labash@lcjones.aclib.siue.edu>
486DRx2/40	15.99	Christopher Lau <lauc@fusion.cuc.ab.ca>
486DX2/66 IBM no-FF	19	NN <coolefa@pmifeg.com>
486SLC2/66 IBM 64c	18.95	Sujat Jamil <sujat@shasta.ee.umn.edu>
486SLC2/66 IBM 128c	18.95	Sujat Jamil <sujat@shasta.ee.umn.edu>
486SLC2/66	19.02	Harry Mangalam <mangalam@uci.edu>
486SLC/50	19.28	Sion Arrowsmith <sion@bast.demon.co.uk>
486BL3/75 IBM 256c	21.40	Anders Stenback <stenback@kuai.se>
486BL3/75 IBM 256c	21.50	Ming S. Chan <ming.chan@canrem.com>
486DX2/66 Cyrix 128c	26.63	Derek Kwan <dkwan@zeus.UWaterloo.ca>
486DX2/66 Cyrix	26.63	Adrian Parker <adrian@willen.demon.co.uk>
486DX2-S/66 256c	26.63	Jean-Marc Wislez <JeanMarc.Wislez@rug.ac.be>
486DX2/66 Cyrix	26.63	Curran W. Fey <fey@biotech.washington.edu>
486BL3/100 IBM 256c	28.36	Anders Stenback <stenback@kuai.se>
486SX-S/33 UMC 0c	20.20	Hynek Med <xmedh02@manes.vse.cz>
486SX-S/40 UMC 0c	26.52	Hynek Med <xmedh02@manes.vse.cz>
486SX-U5/40 UMC 0c	26.63	Dusan Mihajlovic <zdule@herkules.co.yu>

9.6 Sistemi Pentium configurati in modo strano o sbagliato, o variazioni

Sistema	BogoMips	Riferito da
Pentium/66	2.18	Bob Myers <root@shyguy.lonestar.org>

Pentium/90 notebook	9.5	Mark Maybee <markm@cs.colorado.edu>
6x86/120 Cyrix	52.32	Joel Boring <dwild@eskimo.com>
Pentium/83 Overdrive	82.85	Brian Smith <smithb@laraby.tiac.net>
Pentium/83 Overdrive	83.32	Scott Francis <mord@netcom.com>
Pentium/83 Overdrive	82.94	G. Spiegelberg <greg@owens.ridgecrest.ca.us>
Pentium/83 Overdrive	83.35	Jacek Polewczak <jacek.polewczak@csun.edu>
6x86/120 P120+overcl	104.86	Howard Poe <falcor@kingsnet.com>
Pentium MMX/263 overcl	392.40	John Appleby <jma24@cam.ac.uk>
AMD K6-2/300	399.95	Chris Ebenezer <chriseb@nortelworks.com>
Pentium MMX/231	419.43	Juan Domenech <domenech@mail.seric.es>
Pentium MMX/263 overcl	435.87	Juan Domenech <domenech@mail.seric.es>
SMP4 Pentium Pro/200	700.13	R. Carrico <robert_carrico@themoneystore.com>

9.7 Normali sistemi Pentium

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Pentium/60	23.96	Pierre Frenkiel <frenkiel@cdfap1.in2p3.fr>
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Pentium/66	25	Chuck Munro <chuckm@canada.hp.com>
Pentium/66	26.63	Jason M. Naughton <jnaughto@ee.ryerson.ca>
Pentium/66	26.84	Kelly Carmichael <kcarmich@cln.etc.bc.ca>
Pentium/75 256c	29.5	Chris Dodd <cdodd@super.win.or.jp>
Pentium/75	29.79	Scott M. Grim <sgrim@netwalk.com>
Pentium/75	29.80	Torbjoern Kristoffersen <torbkris@online.no>
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Pentium/75	30.22	Zoran Marjanski <bagzor@enterprise.ca>
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Pentium/75	30.22	Stuart Nuttall <u9230106@sys.uea.ac.uk>
Pentium/90 notebook	32.73	Rich Neves <neves@cs.colorado.edu>
Pentium/90	34.07	A. Galbraith <ajgalb@postman.essex.ac.uk>
Pentium/90 zappa 256c	35.6	Sebastien Dedieu <dedieu@emi.u-bordeaux.fr>
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Pentium/90	35.88	Joe Anderson <CPJJA@ttacs3.ttu.edu>
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Pentium/133 256c	53.68	Giuseppe Miceli <ferdy@ccii.unipi.it>
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9.8 Variazioni dei normali Pentium: MMX, Pro, II, Cyrix, AMD

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Pentium MMX/150	307.53	Sami Sihvonen <buggy@fix.no>

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Pentium MMX/200         398.13  Andy Saunders <andi@numenor.oucs.ox.ac.uk>
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Pentium MMX/200         398.13  Sean Horan <sean@psy.ed.asu.edu>
Pentium MMX/200         398.19  Fabio Comolli <comolli@tin.it>
Pentium MMX/200         398.95  Reinhold J. Gerharz <rgerharx@erols.com>
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Pentium MMX/210 overcl  416.97  John Saunders <john@nlc.net.au>
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Pentium MMX/250 overcl  498.07  Maarten van Rossum <m@vr.xs4all.nl>
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Pentium II/266           272.79  Frank Hale <frankhale@worldnet.att.net>
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Pentium II/448 overcl    447.28  Mathieu Bois <mathieu.bois@nomura.co.uk>
Pentium II/450           447.28  Mathieu Bois <mathieu.bois@nomura.co.uk>
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AMD K6/166              332.60  David Parsons <orc@pell.chi.il.us>
AMD K6/166              331     Bill Petersen <brp@cuberramp.net>
AMD K6/200              398.85  n.n. <uh886@freenet.victoria.bc.ca>
AMD K6/200              398.89  Ian Hanschen <hanschen@uwyo.edu>
AMD K6/200              398.98  Philip Lijnzaad <lijnzaad@columba.ebi.ac.uk>
AMD K6/200              399.77  Murtaza Amiji <murti@wpi.edu>
AMD K6/200              399.78  Dan Hetzel <dan@icor.fr>
AMD K6/200              400.58  Paco Culebras Amigo <paco@hades.udg.es>
AMD K6/200              400.59  Sverre H. Huseby <s.h.huseby@usit.uio.no>
AMD K6/200              400.59  Steve Conley <sconley@muck.leonine.com>
AMD K6/200              400.59  Mark Lehrer <edge@dux.raex.com>
AMD K6/200              400.59  Chris Esser <ksqueak@erols.com>
AMD K6/200              400.59  Federico Pellegrin <fede@triangolo.it>
AMD K6/200              400.59  Howard Poe <falcor@kingsnet.com>
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AMD K6/200	400.64	Fabrizio Santini <sanfff@tin.it>
AMD K6/208 overcl	416.15	Jani Halme <jaadha@utu.fi>
AMD K6/208 overcl	416.15	Donnie Savage <dsavage@cris.com>
AMD K6/208	417.97	J.F. Ursetto <ursetto@uiuc.edu>
AMD K6/225	440	n.n. <uh886@freenet.victoria.bc.ca>
AMD K6/225 overcl	448.92	Paco Culebras Amigo <paco@hades.udg.es>
AMD K6/225 undercl	448.92	Henrik Storner <storner@image.dk>
AMD K6/225 overcl	450.56	M. Cramer <mccramer@stuttgart.netscape.de>
AMD K6/233	463.67	Aduanne Carter <drow@blazenet.net>
AMD K6/233	465.31	Michael Haardt <haardt@gmd.de>
AMD K6/233	466.5	R. Garcia <rgarciaitt@aol.com>
AMD K6/233 overcl	466.84	Francesco <root@fly.cnuce.cnr.it>
AMD K6/233 overcl	466.94	Paco Culebras Amigo <paco@hades.udg.es>
AMD K6/233	466.94	Howard Poe <hpoe@nyx.net>
AMD K6/233	466.94	Andreas Haumer <andreas@xss.co.at>
AMD K6/233	466.94	Damien Castelltort <eznerald@mail.mnet.fr>
AMD K6/233	466.94	G. Cantallops Ramis <gcantallopsr@jet.se>
AMD K6/233	466.94	Juergen Hammelmann <juergen@neptun.stgt.de>
AMD K6/233	466.94	Chris Gushue <seymour@iname.com>
AMD K6/239	478.41	Torbjoern Kristoffersen <torbkris@online.no>
AMD K6/239	478.41	Mark Neill <btech@styx.phy.vanderbilt.edu>
AMD K6/239	478.41	Louis van Dompselaar <etaoin@xs4all.nl>
AMD K6/266	534.12	Andreas Czerniak <cognac@toppoint.de>
AMD K6-2/300	598.02	Pasa Guglielmo <gpasa@omedia.ch>
AMD K6-2/300	599.65	Ivo Plana <ipv@tinet.fut.es>
AMD K6-2/300	599.65	Juan Domenech <domenech@mail.seric.es>
AMD K6-2/300	599.65	Ashley Penney <ashp@bastard.co.uk>
AMD K6-2/300	599.65	Rob <im@home.com>
AMD K6-2/300	599.65	Stephen Jenuth <jenuths@homacjen.ab.ca>
AMD K6-2/308	614.40	Erv Walter <walter@chem.wisc.edu>
AMD K6-2/333	663.55	<kuhn@ernie.lpr.e-technik.tu-muenchen.de>
AMD K6-2/333	665.19	A. Bihlmaier <stormtank@gmx.net>
AMD K6-2/338 overcl	675.02	Nicola Fabiano <mx8644@mclink.it>
AMD K6-2/350	699.60	Juan Domenech <domenech@mail.seric.es>
AMD K6-2/400 overcl	799.54	Ivo Plana <ipv@tinet.fut.es>
AMD K6-2/400 overcl	801.18	Phillip Deackes <gsmh@gmx.net>
AMD K6-2/400 overcl	801.18	Jon Riekenberg <jrr8208@ksu.edu>
AMD K6-2/400 overcl	801.18	Ryan Bethke <immortal26@prodigy.net>
AMD K6-2/400	801.18	Wolfgang Zekoll <wzk@um1.pce.de>
AMD K6-2/400	801.18	Ted E. Suter <nexion@home.com>
AMD K6-2/400	801.29	Birko Bergt <birko.bergt@cdc.com>
AMD K6-2/440	878.18	Steve Bourland <sbourlan@ecn.purdue.edu>
AMD K6-2/450 overcl	901.12	Ted E. Suter <nexion@home.com>

9.9 Normali Sistemi Alpha

Sistema	BogoMips	Riferito da
21064/150 Jensen	148.37	Linus Torvalds <torvalds@cc.helsinki.fi>
21064/150 Jensen	149.49	J.L. Brothers <brothers@halcyon.com>
21064/150 Jensen	148.89	Martin Osterman <ost@comnets.rwth-aachen.de>

21064A/275 Cabriolet	271.58	<michal@ellpspace.math.ualberta.ca>
21064A/275 Cabriolet	272	Linus Torvalds <torvalds@cc.helsinki.fi>
21064A/275	272	Stephen Gaudet <sjg@tiac.net>
21064A/275 Cabriolet	272.63	Jay Estabrook <jestabro@amt.tay1.dec.com>
21064A/275 Cabriolet	273.37	David Mosberger-Tang <davidm@cs.arizona.edu>
21064A/275	274.11	Kevin Jacobs <jacobs@eek.cwru.edu>
21064A/300 Cabriolet	298	Jay Estabrook <jestabro@amt.tay1.dec.com>
21064A/300	298	Stephen Gaudet <sjg@tiac.net>
21066/166	162.53	Phil Bostley <pbostley@qualcomm.com>
21066/166	163.05	Matthew Jacob <mjacob@feral.com>
21066/166	163.05	Jon Spreha <jxs557@psu.edu>
21066/166	164.59	David Mosberger-Tang <davidm@cs.arizona.edu>
21066/166 Multia	164.63	Rudolf Gabler <rug@usm.uni-muenchen.de>
21066/166	165	Gareth Bult <gareth@ftech.net>
21066/166	165.04	Craig Ruff <cruff@ncar.ucar.edu>
21066/200	196.9	Danny ter Haar <danny@cistron.nl>
21066/200 UDB overcl	198	Kari Davidsson <d154402@cs.tut.fi>
21066A/233 UDB	229.63	Toon van der Pas <toon@vdpas.hobby.nl>
21066A/233 AS400	230.16	Ophir Ronen <ophir@connectsoft.com>
21066A/233 AS200 Avanti	230.16	B. James Phillippe <bryan@terran.org>
21066A/233 NoName	230.67	T. Bogendoerfer <tsbogend@bigbug.franken.de>
21066A/233 UDB	230.68	Ted Schipper <ted@tedux.hobby.nl>
21066A/233 NoName	230.76	Mikael Nykvist <viper@ludd.luth.se>
21066A/233 UDB	231.21	Eric Smith <eric@goonsquad.spies.com>
21066A/233 NoName	231.21	Jay Estabrook <jestabro@amt.tay1.dec.com>
21066A/266 NoName ov.cl	261.62	Andreas Johansson <ajo@ludd.luth.se>
21066A/266 UDB overcl	261.62	Michael Brennen <mbrennen@fni.net>
21066A/266 NoName ov.cl	262.14	Wim van Dorst <baron@clifton.hobby.nl>
21066A/266 Multia	264	Joshua Grubman <joshg@dn.net>
21066A/284 NoName ov.cl	281.0	<imakino@gloria.cord.edu>
21066A/297 NoName ov.cl	293.6	<imakino@gloria.cord.edu>
21066A/300 UDB ov.cl	294.65	Topi Kanerva <tkanerva@nks.oulu.fi>
21164/266 EB164	265.29	Jay Estabrook <jestabro@amt.tay1.dec.com>
21164/300 EB164	297.79	Hilarius <maurice@ellpspace.math.ualberta.ca>
21164/300 XLT Alcor	297.79	Dave Wreski <dave@nic.com>
21164/300 AS1000	297.79	Salvador Pinto Abreu <spa@sc.uevora.pt>
21164/333 Alcor	331.35	Linus Torvalds <torvalds@cs.helsinki.fi>
21164/333 Alcor	331.35	David Mosberger-Tang <davidm@azstarnet.com>
21164/366 PC164 Durango	363.85	Geerten Kuiper <geerten@bart.nl>
21164/433 PC164	429.89	Paul D. Robertson <proberts@clark.net>
21164/433 PC164	429.91	Bernd Meyer <bmeyer@cs.monash.edu.au>
21164/433 Maita	429.91	Bill Broadley <bill@math.ucdavis.edu>
21164/433 PC164	430.96	<rainer.landes@physik.uni-karlsruhe.de>
21164/433 EB164	430.96	<Metod.Kozelj@rzs-hm.si>
21164/433 PC164	430.96	H. Sumargo <habibie@robotic.eng.fiu.edu>
21164/433 PC164	431.94	Timm Gleason <timm@bess.com>

21164/466	PC164	464.51	Daryll Strauss <daryll@d2.com>
21164/500		497	Alex Butcher <alex@asimov.annex.co.uk>
21164/500	PC164	497.02	C.J. Grayce <cgrayce@wasatch.ps.uci.edu>
21164/500		497.05	Heiner Kruener <hk@martian.ping.de>
21164/500	AS500	497.03	Jim Nance <jlnance@avanticorp.com>
21164/500	P7	497.03	Jan guldentops <jacko@ba.be>
21164/500	EB164 Durango	497.43	Kevin Jacobs <jacobs@eek.cwru.edu>
21164A/500	PWS	497.02	Robert Harley <robert.harley@inria.fr>
21164A/500	PC164	497.02	Stephen Oberski <sfo@deterministic.com>
21164A/533	PC164LX	529.53	Harvey J. Stein <hjstein@bfr.co.il>
21164PC/533	PC164SX	529.53	Danny ter Haar <dth@cistron.nl>
21164PC/533	PC164SX	529.53	Shane Sturrock <sss@holyrood.ed.ac.uk>
21164PC/533	PC164SX	529.53	Wim van Dorst <baron@clifton.hobby.nl>
21164A/533	PC164LX	530.57	Ronny Ranerup <ronny@axis.com>
21164A/533	PC164LX	530.57	Bill Broadley <bill@math.ucdavis.edu>
21164A/600	PC164LX	595.59	L.F. Donaldson <donaldlf@cs.rose-hulman.edu>
21164A/600	PC164LX	595.59	<stepan@wesley.informatik.uni-freiburg.de>
21164A/600	PC164	597.60	Fabrizio Santini <sanfff@tin.it>
21164A/666	PC164LX	662.70	<stepan@wesley.informatik.uni-freiburg.de>
21264/400	Pass-1	794.82	Jay Estabrook <jay.estabrook@digital.com>

9.10 Normali Sistemi Motorola

Sistema		BogoMips	Riferito da
68030/16	Atari Falcon	3.90	Jay T. Millar <jmillar@eaglequest.com>
68030/16	Atari Falcon	3.95	J.L. Brothers <brothers@halcyon.com>
68030/16	Atari Falcon	3.98	<Roman.Hodek@informatik.uni-erlangen.de>
68030/20	MacII Si	4.88	Bill Maloy <maloy@goldinc.com>
68030/20	0c	4.92	Chris Nadigh <chrnadig@iiic.ethz.ch>
68030	Amiga 3000	6.08	Andy Wick <awick@vt.edu>
68030/30	Amiga 4000	6.09	Karsten Merker <km@golf.dinet.com>
68030/25	Amiga 3000	6.12	Glen Hewlett <hewlett@planeteer.com>
68030/25	Amiga 3000	6.21	Hamish Macdonald <hamish@bnr.ca>
68030/25	Amiga 3000	6.21	J.L. Brothers <brothers@halcyon.com>
68030/32	Atari Falcon	7.91	Franz Korntner <fkorntne@bazis.nl>
68030	Atari TT	7.96	<schwab@issan.informatik.uni-dortmund.de>
68030/32	Atari MegaST	7.98	E.J. van den Bussche <busscheh@ksepl.nl>
68030/33	Atari TT	7.98	<Roman.Hodek@informatik.uni-erlangen.de>
68030	Atari TT	7.98	Wayne Booth <trek@ihgp114r.ih.att.com>
68030/60		8.06	Korey Budgen <kbudgen@st.nepean.uws.edu.au>
68030/33	Amiga 2000	8.14	W. Haidinger <e9225662@stud1.tuwien.ac.at>
68030/48	32c	11.89	Martin Rogge <Martin_Rogge@ki.maus.de>
68030/50	Atari	12	<Roman.Hodek@informatik.uni-erlangen.de>
68030/50	Amiga 1200	12.36	Chris Sumner <chris@ganymede.sonnet.co.uk>
68030/50	Amiga 1200	12.4	Richard Jerome <etlrdje@tigger.ericsson.se>
68030/50	32c	12.42	Michael Plonus <michi@pluto.ping.de>
68030/50	Amiga 1200	12.33	Detrix <detrix@popd.ix.netcom.com>
68030/50	Amiga 1200	12.36	E.J.M. Brocklesby <ejb@klamath.demon.co.uk>

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68040/24 Amiga 4000-40   16.6   Hamish Macdonald <hamish@bnr.ca>
68040/24 Amiga 4000-20   16.60  J.L. Brothers <brothers@halcyon.com>
68040/25 Amiga 4000-040  16.61  <Geert.Uytterhoeven@cs.ku-leuven.ac.be>
68040/25 Amiga 4000      16.61  Lawrence <lawrenc@nextwork.rose-hulmand.edu>
68040/60 Amiga 4000-40   18.99  Darren Enns <dmenns@surf.pangea.ca>
68040/32 Medusa T40      21.25  <Hartmut.Koptein@et-inf.fho-emden.de>
68040    Amiga 2000      21.86  Ron Flory <rjflory@feist.com>

68060/50 Amiga 1200      99.53  baba <baba@pa.yokogawa.jp>
68060/50 Amiga 4000      99.74  Stefan Tauche <otauche@uni-paderborn.de>
68060/50 Amiga 4000     100.16  Jan Johansson <jj@mordor.it.kth.se>
68060/66 Amiga CS MkII  132.71  Paul Hill <paul@lagernet.clara.co.uk>
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9.11 Altri Sistemi: Sparc, PowerPC, Mips, Intel 8088/286 ELKS

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Sistema               BogoMips  Riferito da
Sparc sun4c              17.94  J.L. Brothers <brothers@halcyon.com>
Sparc SLC/20 S1          19.86  Simon Karpen <slk@linux-shell.net>
Sparc sun4c/25           24.88  Paolo <paolo0@yahoo.com>
Sparc IPX 4c             39.83  Paul D. Robertson <proberts@clark.net>
Sparc SS10 super50 4m    39.93  Juan Cespedes <cespedes@etsit.upm.es>
Sparc microS/50 SS-LX    49.76  Will Shaw <romulan@netwatch.clemson.edu>
Sparc SS20               49.86  Gary A. Donahue <lordgad@webspan.net>
Sparc hyperS Classic 4m  49.86  Juan Cespedes <cespedes@etsit.upm.es>
Sparc Voyager portable   59.80  Edward Austin <eastin@shl.com>
Sparc SS5 Netra          68     Craig Falconer <cf@papanui.school.nz>
Sparc SS50               74.95  Kaz <kaz@latte.cafe.net>
Sparc SS10 hyperS        99.73  Thomas B. Fox <tfox@oliverdesign.com>
Sparc SS5/66            109.77  Lance S. Nehring <lnehrin@uswest.com>
Sparc SS4/110           109.77  Chris Sylvain <csylvain@umms-itg.ab.umd.edu>
Sparc hSparc/150 Sun4m  150.32  Tethys <tethys@ml.com>
Sparc Ultra1 sun4u      284.05  Iban Cardona <icc@seric.es>

Sparc UltraII/270       539.03  Pieter Krul <pieter@dare.demon.nl>
Sparc UltraII/360       719.26  Bjoern Augustsson <d3august@dtek.chalmers.se>

PowerPC 601/60 Mac6100   45.24  J.L. Brothers <brothers@halcyon.com>
PowerPC 601/66 Mac       51.62  Fred Klein <klein@des3.u-strasbg.fr>
PowerPC 601/60 Mac6100   59.38  Kent Radek <goo@itd.sterling.com>
PowerPC 601/75 Mac7200   73.93  Dimitris Tsifakis <jimmy@typhoeus.dg.uoa.gr>
PowerPC 601/100 Mac7500  98.91  Russ Hoffman <reh@fore.com>
PowerPC 601/110 Mac8100 108     Charles Eicher <ceicher@inav.net>

PowerPC 603/100          66.56  A. Costa <c_chaos@chaosnet.wahnapitae.on.ca>

PowerPC 604/100 PPS6050  99.74  Evaldas Darcianovas <evaldas@isi.kvm.lt>
PowerPC 604/100         199     Hamish Marson <hamish@aixrules.nz.ibm.com>
PowerPC 604/100 PPS7248 199.48  Evaldas Darcianovas <evaldas@isi.kvm.lt>
PowerPC 604/132 Mac7500 263.78  Patrick Murmann <murmann@mi.uni-erlangen.de>
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PowerPC 604/133 MOT PS  266.24  Christoper Harrel <cnh@eng.mindspring.net>
PowerPC 604/150 Mac9500 297.73  Jean-Philippe Lord <jpl@binex.com>
PowerPC 604e/195        359.63  Michael Potts <pottsjam@flyernet.udayton.edu>
PowerPC 604/200 Mac8600 320     Julien Sebot <sebot@lri.fr>
PowerPC 604e/200 SM4000 399.12  Roland Kuhn <kuhn@physik.uni-kassel.de>

PowerPC 750/266 Mac     532.48  Fritz Anderson <fritza@tezcat.com>

Mips R4000/100           48.30  J.L. Brothers <brothers@halcyon.com>
Mips R4000/100 Magnum    50.03  Andreas Busse <andy@soft-n-hard.de>
Mips R4400/134 Acer Pica 67.10  Andreas Busse <andy@soft-n-hard.de>
Mips R4400/134 Acer Pica 67.10  Ralf Baechle <ralf@waldorf-gmbh.de>
Mips R4600/133 Tyne     133.12  Ralf Baechle <ralf@waldorf-gmbh.de>
Mips R4600/133 RM200    133.08  Ralf Baechle <ralf@julia.de>
Mips R5000/150 Indy     154.83  Ralf Baechle <ralf@julie.de>

Intel 8088/4.77           0.02  Tim Van der Linden <timvdl@innet.be>
Intel 8088/10             0.05  Tim Van der Linden <timvdl@innet.be>
Intel 8086                0.5   Kin Lau <gabe@zot.io.org>
Intel 286 Tandy           0.75  Joey Hess <joey@kite.ml.org>
Intel 286                 0.99  Anders Stenback <stenback@hehe.com>
Intel 286/8 VAXMate       1.03  Andrew Costa <c_chaos@wahnapitae.on.ca>
Intel 286/10 Commodore    1.30  Hans-Joachim Baader <hans@grumber.inka.de>
Intel 286 PS2             2.32  Morillas C.H. Antonio <morilla@fie.us.es>
Intel 286 PS2             2.34  Joey Hess <joey@kite.ml.org>
```

9.12 Normali Sistemi con molte CPU

```
Sistema               BogoMips  Riferito da
SMP2 Pentium/75          59.50  Michael Engel <engel@unix-ag.uni-siegen.de>
SMP2 Pentium/90          71.68  Edwin Whitelaw <elw@ivc.com>
SMP2 Pentium/90          71.98  Daniel Luhde-Thompson <dl10010@cam.ac.uk>
SMP2 Pentium/90          72.08  Alan Cox <alan@cymru.net>
SMP2 Pentium/100         79.46  Lam Dang <dangit@ix.netcom.com>
SMP2 Pentium/100         80.08  Christian Tan <pigeon@xs4all.nl>
SMP2 Pentium/100         80.08  McNalley <jmcnalle@attila.stevens-tech.edu>
SMP2 Pentium/120         95.85  Maurice de Bijl <maurice.d.bijl@topic.nl>
SMP2 Pentium/133        106.09  Maurice de Bijl <maurice.d.bijl@topic.nl>
SMP2 Pentium/166        133.53  <Reinhard.Simkovics@jk.uni-linz.ac.at>
SMP2 Pentium/200        158.72  Ed Hoppitt <edward@dcs.rhbnc.ac.uk>

SMP2 Pentium MMX/200    794.62  Kristian Koehntopp <kris@koehntopp.de>
SMP2 Pentium MMX/200    796.26  Eric Clark <eclark@opencominc.com>
SMP2 Pentium MMX/233    927.33  Jeff White <jwhite@ghq.com>

SMP2 Pentium Pro/150    299.00  Steven Gallo <smgallo@numenor.csgeeks.org>
SMP2 Pentium Pro/150    299.01  Eric van Dijken <E.vanDijken@PTT-Telecom.nl>
SMP2 Pentium Pro/166    331.78  Eric van Dijken <E.vanDijken@PTT-Telecom.nl>
SMP2 Pentium Pro/180    358.81  Eric van Dijken <E.vanDijken@PTT-Telecom.nl>
SMP2 Pentium Pro/180    358.81  Frankie East <fae2401@rit.edu>
```

```
SMP2 Pentium Pro/180    358.81  James K. Wiggs <wiggs@wolfenet.com>
SMP2 Pentium Pro/200    396.25  Will Shaw <shaww@dialup.dstm.com>
SMP2 Pentium Pro/200    398.13  David Konerding <dek@cgl.ucsf.edu>
SMP2 Pentium Pro/200    398.13  B. Heinen <benedikt.heinen@infrasys.ascom.ch>
SMP2 Pentium Pro/200    398.13  Ramon Huerta <huerta@minerva.ii.uam.es>
SMP2 Pentium Pro/200    398.14  C.-A. Possamai <camille@sugiton.cnrs-mrs.fr>
SMP2 Pentium Pro/200    398.14  Leland <llucius@millcom.com>
SMP2 Pentium Pro/200    398.14  John Lellis <lellis@dmccorp.com>
SMP2 Pentium Pro/200    398.14  Jim Gifford <jim@mail.rath.peachnet.edu>
SMP2 Pentium Pro/200    398.14  Manuel Galan <root@ulpgc.es>
SMP2 Pentium Pro/200    398.6   Bill Davidsen <davidsen@tmr.com>
SMP2 Pentium Pro/200    398.95  Fons Rademakers <f.rademakers@cern.ch>
SMP2 Pentium Pro/200    398.98  Greg Fausak <glfausak@august.com>
SMP2 Pentium Pro/200    400.18  Attila Karpati <karpati@cs.elte.hu>
SMP2 Pentium Pro/233    464.49  F. Baitinger <baiti@zenon.toplink.net>
SMP4 Pentium Pro/133    532.07  Erik Walthinsen <omega@sequent.com>
SMP4 Pentium Pro/200    794.62  Kenneth Hedlund <c415khd@nll.se>
SMP4 Pentium Pro/200    796.28  John Pelan <j.pelan@am.qub.ac.uk>

SMP2 Pentium II/233     466.94  Eli Kane <eli@crl.nmsu.edu>
SMP2 Pentium II/266     530.84  Shon Martin <cshoon@oberlin.edu>
SMP2 Pentium II/266     534.12  n.n. <service@cprompt.sk.ca>
SMP2 Pentium II/266     534.12  Emmanuel Tychon <manu@acm.org>
SMP2 Pentium II/274     546.41  Richard Jellinek <rj@suse.de>
SMP2 Pentium II/300     597.20  Paul Sheer <psheer@obsidian.co.za>
SMP2 Pentium II/300     598.02  Hans Ameel <hans@pla.to>
SMP2 Pentium II/300     599.76  S. Curtarolo <auro@spiro.fisica.unpd.it>
SMP2 Pentium II/333 ov  665.73  S. Curtarolo <auro@spiro.fisica.unpd.it>
SMP2 Pentium II/400     796.26  Michael Necaise <necaise@jlab.org>

SMP2 Celeron/450        894.57  Stephan Eisler <stephan@lingo.gun.sub.org>
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9.13 Sistemi Non-Linux (solo riferimento)

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Sistema                     OS       BogoMips Riferito da
Z80 TRS80 model 4           TRSDOS      0.004 <cervasio@airmail.net>
68000/8 Macintosh Classic   MacOS       0.53  <jimmy@typhoeus.dg.uoa.gr>
68020/20 Sun 3              SUNOS       2.0   <korpela@ssl.berkeley.edu>
68020/16 Macintosh LC       MacOS       3.09  <jimmy@typhoeus.dg.uoa.gr>
68020/25 Sun 3-180          SUNOS       4.0   <korpela@ssl.berkeley.edu>
Sparc Sun 3-60              SUNOS       4.00  <tranter@software.mitel.com>
Sparc Sun 3-80              SUNOS       4.00  <tranter@software.mitel.com>
68030/25 Macintosh IIci     NetBSD      5.62  <kirk-corey@uiowa.edu>
68040/25 Macintosh LC475    MacOS      12.27  <jimmy@typhoeus.dg.uoa.gr>
68040/33 HP9000-280         HP-UX      14     <niles@axp745.gsfc.nasa.gov>
68040/25 Apollo 5500        DomainOS   14.00  <kirk-corey@uiowa.edu>
Sparc Sun 4-280             SUNOS      16.0   <korpela@ssl.berkeley.edu>
Sparc Sun IPC/40            Solaris    16.00  <gong@cs.msu.su>
68040/25 HP9000-425         DomainOS   16.00  <kirk-corey@uiowa.edu>
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68040 NextStep	(?)	16.26	<petergun@coffeehaus.com>
Sparc Sun SS1	SUNOS	18.00	<tranter@software.mitel.com>
Sparc Sun SS1	SUNOS	18.00	<jimmy@typhoeus.dg.uoa.gr>
IBM RS6000 320	AIX	18.00	<mg@svtpc3.fb12.tu-berlin.de>
Sparc Sun SS1+	SUNOS	19	<swmike@uplift.df.lth.se>
Sparc Sun SS1+	SUNOS	24.00	<tranter@software.mitel.com>
Sparc Sun IPC	SUNOS	24.00	<tranter@software.mitel.com>
IBM RS6000 320H	AIX	24.00	<mg@svtpc3.fb12.tu-berlin.de>
Sparc Sun Sparcstation2	SUNOS	26.00	<gong@cs.msu.su>
SparcClassic/50	Solaris	32.00	<gong@cs.msu.su>
Sparc Sun ELC	SUNOS	32.00	<tranter@software.mitel.com>
HP-PA 9000-720	HP-UX	32.00	<metod.kozelj@rzs-hm.si>
Sparc Sun SS10	SUNOS	34.00	<tranter@software.mitel.com>
Sparc Sun SS10	SUNOS	34.00	<makler@man.torun.pl>
Pentium/100	Win-NT	36.21	<marcus@healthchex.com>
Sparc Sun Sparcstation2	SUNOS	38.0	<korpela@ssl.berkeley.edu>
Mips R4000/100 Indy	(?)	48.00	<p.verwer@organon.akzonobel.nl>
Mips R4000/100 SGI IndySC	Irix	48.00	<lziegler@csbsju.edu>
HP-PA 9000-720	HP-UX	48.00	<metod.kozelj@rzs-hm.si>
Sparc SS10	SUNOS	48.00	<makler@man.torun.pl>
IBM RS-6000-250/66	AIX	52.00	<gl23@e4.hrz.uni-giessen.de>
Sparc Sun Sparcstation10d	SUNOS	54.0	<korpela@ssl.berkeley.edu>
Sparc SS1000 2CPU	SUNOS	58.00	<gong@cs.msu.su>
Sparc SS20	SUNOS	60.00	<makler@man.torun.pl>
IBM RS6000-250/80	AIX	62.00	<gl23@e4.hrz.uni-giessen.de>
Alpha 21064/133 Decstation	OSF1	64	<niles@axp745.gsfc.nasa.gov>
Alpha 21064/133 Dec3000	OSF1	66.00	<daniels@helplaxp1.harvard.edu>
Sparc Sun SS5	SUNOS	68.00	<tranter@software.mitel.com>
Sparc Sun SS20	SUNOS	72.00	<tranter@software.mitel.com>
Sparc Sun SS20/712	Solaris	74	<spohr@qmos.com>
Mips R4400/150 Challenge	(?)	74.00	<p.verwer@organon.akzonobel.nl>
Mips R4400/150 Indigo2Extr	(?)	74.00	<p.verwer@organon.akzonobel.nl>
HP-PA 9000-715	HP-UX	74.00	<metod.kozelj@rzs-hm.si>
Sparc SS5 sun4m	SUNOS	84.00	<chrisv@allegria.com>
Sparc SS1000E	SUNOS	84.00	<makler@man.torun.pl>
Alpha	OSF1	92.00	<petergun@coffeehaus.com>
Mips R4400/200 Indigo2Extr	(?)	98.00	<p.verwer@organon.akzonobel.nl>
HP-PA 9000-735/99	HP-UX	98.00	<lankhors@cs.rug.nl>
Sparc SS5	SUNOS	104.00	<makler@man.torun.pl>
Sparc Sun SS4/110	Solaris	108	<spohr@qmos>
Sparc Sun SS4	Solaris	108.00	<jimmy@typhoeus.dg.uoa.gr>
Sparc Sun SS5	SUNOS	110	<swmike@uplift.df.lth.se>
Alpha 21064A/233	OSF1	114	<niles@axp745.gsfc.nasa.gov>
Alpha 3000 21064/300	OSF1	120.00	<gl23@e4.hrz.uni-giessen.de>
HP-PA 700/125	HP-UX	122	<niles@axp745.gsfc.nasa.gov>
HP-PA 9000-735/125	HP-UX	122.00	<lankhors@cs.rug.nl>
Mips R4600/133 SGI Indy	Irix	132	<lziegler@csbsju.edu>
MIPS R5000/150	Irix	148.00	<nachiket@indimax.hydroqual.com>
IBM 6x86	OS/2	149.13	<mikedg@ghostbbs.pandora.it>
Alpha	OSF1	180.0	<mauger@ensinfo.univ-nantes.fr>

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MIPS R10000/195             Irix     194.00  <nachiket@indimax.hydroqual.com>
Alpha 21164/333 AS500       OSF1     222.00  <daniels@helplaxp1.harvard.edu>
Sparc Ultra-1 sun4u         Solaris  254.00  <alternat@rwth-aachen.de>
PPC604/133 IBM RS6000       AIX      254.00  <kirk-corey@uiowa.edu>
IBM RS-6000 43P powerpc     AIX      260.00  <gl23@e4.hrz.uni-giessen.de>
Sparc U-1 sun4u             SunOS    284.00  <gl23@e4.hrz.uni-giessen.de>
Alpha 21164/433 DPW433au    OSF1     286.00  <daniels@helplaxp1.harvard.edu>
HP9000-C160/160             HP-UX    316.00  <nicolai@prz.tu-berlin.de>
Sparc Sun US1/170           Solaris  330     <spohr@qmos>
Sparc Sun US1/167           Solaris  330     <jimmy@typhoeus.dg.uoa.gr>
Sparc Ultra-1 sun4u         SUNOS    334.00  <chrisv@allegria.com>
Alpha 3000-600S             VMS      348.61  <metod.kozelj@rzs-hm.si>
Alpha server 1000-4/200     VMS      397.68  <metod.kozelj@rzs-hm.si>
Sparc Sun-Ultra30/248       Solaris  482.00  <marc.Quinton@stna.dgac.fr>
Sparc US2/296 2cpu          SUNOS    596.00  <manu@acm.org>
Cray J90 Y-MP/100 16cpu     Unicos   912.00  <lankhors@cs.rug.nl>
Sequent Symmetry 6xP5/166   Dynix    984.00  <omega@sequent.com>
Sequent Symmetry 16xP5/66   Dynix   1056.00  <omega@sequent.com>
HP9000-C160/160             HP-UX   1278.00  <nicolai@prz.tu-berlin.de>
Sequent NUMA-Q 12x P6/180   Dynix   1416.00  <omega@sequent.com>
Sequent NUMA-Q 32x P6/180   Dynix   3776.00  <omega@sequent.com>
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10 Firma

Mio figlio `Roderick` e sua sorella `Isolde` se la stanno cavando bene. Isolde, 4 anni, va a scuola, e sa già scrivere il suo nome. Suo fratello Roderick, 2 anni, riconosce a voce alta di sapere già anche lui le sue lettere: P di papà, R di Roderick!

Met vriendelijke groeten, Wim van Dorst.

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