BogoMips mini-Howto

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Teks ini berisi informasi tentang BogoMips, yang dikumpulkan dari berbagai sumber seperti news dan e-mail. Teks ini dapat diambil dari berbagai archive Linux di .../*HOWTO/mini/BogoMips*. Artikel ini pertamakali diterbitkan di the Linux Journal, edisi Januari 1996. Tambahan baru pada CPU yang belum terdaftar di sini sangat diharapkan. Daftar tersebut dapat dikirimkan lewat e-mail ke penulis.

Contents

1 Penilaian BogoMips Linux pada CPU tunggal yang terendah dan tertinggi. 2

1.1 Yang Terendah . . . 2

1.2 Yang Tertinggi . . . 2

2 Apa itu BogoMips ? 2

3 Bagaimana menduga seberapa tinggi nilai BogoMips yang wajar 3

4 Bagaimana mengetahui berapa BogoMips sekarang 4

5 Variasi hasil perhitungan BogoMips 4

6 BogoMips ... failed 4

7 Bagaimana dengan CPU klon (Cyrix, NexGen, AMD, etc) 5

8 Mengapa sebaiknya memperhatikan nilai BogoMips 5

9 Daftar hasil perhitungan BogoMips 6

9.1 Sistem 386 yang konfigurasinya kacau atau jelek. . . . 6

9.2 Sistem 386 normal: SX, DX, Nexgen . . . 6

9.3 Sistem 486 yang konfigurasinya kacau atau jelek . . . 8

9.4 Sistem 486 yang normal . . . 9

9.5 Variasi 486 yang normal: Cyrix/IBM, UMC . . . 14

9.6 Sistem Pentium yang konfigurasinya kacau atau jelek . . . 14

9.7 Sistem Pentium yang Normal . . . 15

9.8 Variasi sistem Pentium yang normal: MMX, Pro, II, Cyrix, AMD . . . 18

9.9 Sistem Alpha yang Normal . . . 20

9.10 Sistem Motorola yang normal 22
9.11 Sistem lain: Sparc, PowerPC, Mips, Intel 8088/286 ELKS 23
9.12 Sistem Multi CPU yang normal 24
9.13 Sistem Non-Linux (untuk referensi) 25

10 Signatur **26**

1 Penilaian BogoMips Linux pada CPU tunggal yang terendah dan tertinggi.

Berikut adalah penilaian BogoMips Linux pada CPU tunggal yang tertinggi dan terendah, sampai artikel ini ditulis.

1.1 Yang Terendah

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

1.2 Yang Tertinggi

- Jay Estabrook, `jay.estabrook@digital.com`
- Alpha 21164, 400 MHz, Pass-1
- 794.82 BogoMips

2 Apa itu BogoMips ?

>Dari Lars Wirzenius,' `wirzeniu@kruuna.Helsinki.FI` dikirimkan pada tanggal 9 September 1993, menjelaskan tentang BogoMips, dengan informasi tambahan oleh Wim van Dorst:

> 'MIPS adalah singkatan dari Millions of Instructions Per Second. Itu adalah ukuran untuk kecepatan perhitungan pada suatu program. Seperti pengukuran lainnya, seringkali disalahgunakan daripada digunakan secara benar (sangat sulit untuk membandingkan MIPS bagi komputer-komputer yang berbeda jenis). BogoMips adalah ciptaan Linus. Kernel (atau device driver waktu itu ?) membutuhkan loop timing (waktu sangat pendek dan/atau dibutuhkan agar dapat lebih akurat untuk loop pada metode tunggu yang tidak sibuk), yang harus dikalibrasikan terhadap kecepatan prosesor pada mesin. Karena itu, pada saat boot kernel mengukur seberapa cepat suatu loop sibuk yang ada pada komputer. "Bogo" berasal dari kata "bogus", yang berarti palsu. Jadi, nilai BogoMips memberikan indikasi tentang kecepatan prosesor, tetapi tidak terlalu akurat secara ilmiah.

> Ada dua alasan kenapa BogoMips dituliskan pada saat boot: a) hal ini sangat berguna untuk debugging dan untuk memeriksa apakah cache komputer dan tombol turbo bekerja dengan baik, dan b) Linus sering nyengir bila melihat ada orang bingung di news.'

BogoMips ditulis pada file `/usr/src/linux/init/main.c` (algoritma C sederhana), dan variabel pada kernel yang bersangkutan, yaitu `loops_per_sec` digunakan pada berbagai driver net, scsi, dan char. Fungsi delay sebenarnya dibuat dalam assembly dan karena itu tiap port punya versi sendiri-sendiri di `/include/asm/delay.h`. Variabel `loops_per_sec` ini digunakan pada driver char, net, dan scsi, silahkan lihat:

```
find /usr/src/linux -name '*.[hcS]' -print -exec fgrep loops_per_sec {} \;
```

3 Bagaimana menduga seberapa tinggi nilai BogoMips yang wajar

>Dari Ian Jackson, `ijackson@nyx.cs.du.edu`, dan Przemek Klosowski, serta banyak diupdate dan dikembangkan oleh Wim van Dorst untuk data sekarang, dijelaskan berikut:

Sebagai perkiraan, BogoMips dapat dihitung dengan rumus:

```
System                BogoMips                          Perbandingan
Intel 8088            clock * (0.004 plusminus 0.001)    0.02
Intel/AMD 386SX       clock * (0.14  plusminus 0.01)     0.8
Intel/AMD 386DX       clock * (0.18  plusminus 0.01)     1 (definisi)
Motorola 68030        clock * (0.25  plusminus 0.005)    1.4
Cyrix/IBM 486         clock * (0.34  plusminus 0.065)    1.8
Intel Pentium         clock * (0.40  plusminus 0.035)    2.2
Intel 486/AMD 5x86    clock * (0.50  plusminus 0.01)     2.8
Mips R4000/R4400      clock * (0.50  plusminus 0.015)    2.3
Nexgen Nx586          clock * (0.75  plusminus 0.010)    4.2
PowerPC 601           clock * (0.84  plusminus 0.015)    4.7
Alpha (all CPUs)      clock * (0.99  plusminus 0.005)    5.5
Intel Pentium Pro     clock * (0.99  plusminus 0.005)    5.5
Cyrix 5x86/6x86       clock * (1.00  plusminus 0.005)    5.6
Intel Pentium II      clock * (1.00)                     5.6
Mips R4600            clock * (1.00)                     5.6
Alpha 21264           clock * (1.99)                    11.1
AMD K5/K6             clock * (2.00  plusminus 0.010)   11.1
Pentium MMX           clock * (2.00)                    11.1
Motorola 68060        clock * (2.01)                    11.2

Motorola 68040     (insufficient data yet)
Sparc              (insufficient data yet)
```

Perhatikan bahwa perhitungan loop BogoMips tidak menggunakan fasilitas paralel dari prosesor, misalnya pada mesin-mesin Intel Pentium dan Alpha 21164.

Juga lihat bahwa perhitungan loop BogoMips bagi CPU non-Intel mirip dengan Intel, namun tidak sama.

4 Bagaimana mengetahui berapa BogoMips sekarang

Ada tiga cara mengetahui berapa nilai BogoMips sistem Anda, yaitu:

1. Lihat di file `/proc/cpuinfo`, misalnya dengan perintah ‘`cat /proc/cpuinfo`‘.
2. Lihat di output syslog dan cari berapa nilai BogoMips yang tercetak pada saat booting (bila perlu gunakan program dmesg atau syslogk)
3. Gunakan program bogomips.

Cara lain untuk mengetahui nilai ini juga bisa dilakukan pada sistem non-Linux lainnya, misalnya pada mesin Cray, dan sebagainya, dengan menggunakan program bogomips. program. Dikutip dari file readme oleh Jeff Tranter, `jeff_tranter@mitel.com`:

> ‘Malas untuk mereboot sistem Anda agar bisa dilihat berapa BogoMIPS hari ini ? ... "Bogomips" adalah suatu program mandiri yang mencetak kinerja sistem Anda dengan menggunakan benchmark yang paling dikenal di dunia. Program ini menggunakan kode yang sama yang digunakan pada kernel Linux pada saat boot, tetapi berjalan sebagai program user. .... Versi 1.3 dari BogoMIPS sekarang portable dan dapat dijalankan dari sistem apapun yang mendukung kompiler dan library ANSI C.’

Perhatikan bahwa bergantung dari nilai load sistem yang dihitung dengan program ini dapat lebih rendah dari pada yang terdaftar pada daftar berikut. Secara intrinsik, program semacam ini tidak dapat secara akurat memberikan informasi serupa dengan saat boot, karena load sistem akan terpengaruh karena dapat dijalankan sebagai program user.

Perhatikan bahwa file `sunsite.unc.edu:/pub/Linux/system/status/bogo-1.2.tar.gz/` berisi versi terakhir 1.3 (sic) yang kadaluwarsa.

5 Variasi hasil perhitungan BogoMips

>Dari Linus Torvalds, `torvalds@cc.helsinki.fi`, menjelaskan tentang perbedaan yang dapat dilihat pada penilaian BogoMips, di c.o.l.development pada tanggal 28 April 1994

> ‘Loop BogoMips dihitung dengan "kuantisasi", jadi Anda akan sering menemukan nilai yang sama setiap saat. Anda akan sering mendapatkan nilai yang berbeda jika kecepatan sistem ada pada "sisi", pada saat perbedaan kecil (waktu yang berbeda pada saat interrupt tick dll) akan membuat nilai BogoMips melonjak.’

6 BogoMips ... failed

Seperti yang disarankan oleh berbagai pertanyaan di net dan mail pribadi, misalnya., oleh Lily, `lbliao@alumni.caltech.edu`, dan Pierre Frenkiel, `frenkiel@cdfap2.in2p3.fr`. Pada bulan Maret 1995 mereka menanyakan:

'Pada saat saya memboot Linux saya mendapatkan pesan:

```
Calibrating delay loop.. ok - 23.96 BogoMips
failed
```

Dimana/kenapa kalibrasi loop delay mengalami kegagalan?'

Tidak, tidak gagal. Bila terjadi kegagalan, maka pesannya adalah

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

Yang mungkin gagal dalam kasus tadi adalah suatu alat yang tidak Anda miliki pada sistem Anda, tetapi terdaftar dalam kernel, yang dicoba dideteksi segera setelah menghitung BogoMips yaitu saat device driver diinisialisasi. Pertamakali adalah device SCSI, kemudian Net, dsb. Tiap kegagalan tidak dilaporkan secara detil. Misalnya driver AHA152x. Efek lain dari driver yang gagal (bukannya karena kegagalan penghitungan BogoMips) adalah crashnya sistem, waktu tunggu yang lama, dan terkuncinya sistem.

Karena mulai Linux 1.2 telah dilakukan peningkatan dalam penayangan pesan kesalahan, maka upgrade pada versi tersebut akan memberi penjelasan rinci driver apa saja yang gagal.

7 Bagaimana dengan CPU klon (Cyrix, NexGen, AMD, etc)

CPU semacam Cyrix 486 memerlukan software yang mengenable cache, yang kadang disebut dengan software BogoBoost. Cyrix 5x86 dan 6x86 mungkin mendapatkan nilai BogoMips yang secara drastis meningkat karena pilihan branch-prediction (pilihan pada BIOS). Perhatikan bahwa peningkatan kemampuan sistem adalah mungkin marginal. Ada beberapa paket yang tersedia untuk melakukan penyesuaian pada CPU Cyrix, misalnya patch bogoboost, cx5x86mod, dan set6x86, dari setiap archive yang biasa. Dilaporkan bahwa CPU Cyrix 6x86 mungkin memberikan nilai yang lebih baik bila kernel dikompilasi dengan 486-optimization, daripada Pentium-optimization.

CPU NexGen 386-enhanced, yang diberi nama Nx586, terdaftar sebagaimana 386, karena pada kenyataanya, mesin ini berlaku seperti Pentium tetapi tidak relevan ke BogoMips.

AMD 5x86, juga sering disebut AMD 486DX5, menghasilkan nilai empat kali lipat dari mesin 486/33. Mesin ini sejajar dengan CPU 486 lain. AMD K5 dan K6 adalah setipe dengan Pentium, dengan pengali BogoMips sendiri.

8 Mengapa sebaiknya memperhatikan nilai BogoMips

Penulis akan mencoba mengemukakan dua alasan kenapa BogoMips harus diperhatikan:

1. Untuk melihat apakah sistem ada dalam jangkauan prosesor yang wajar, frekuensi clocknya, dan cache. Banyak CPU cenderung salah tersetup karena kesalahan
   - seting memory cache (write-back tidak digunakan untuk BogoMips, dilaporkan bila ini diset maka nilai berkurang 5, tetapi write-through ok)
   - tombol turbo (harusnya ON)
   - emulasi palsu cache pada BIOS-software (gantinya cache betulan)

- cache serupa dan masalah yang berkenaan dengan clock.

2. Untuk mengetahui apakah sistem Anda lebih cepat dari milik penulis. Tentu saja hal ini sangat salah, tidak layak, ngaco, dan sangat tidak berguna, tetapi semua benchmark memiliki masalah serupa. Jadi kenapa tidak menggunakannya? Hal ini menurunkan sifat bodoh yang belum menghentikan orang dari menggunakan benchmark, atau sudah? :-)

Perhatikan bahwa kegunaan dari benchmarking yang sebenarnya dijelaskan pada the Linux Benchmarking Howto by André D. Balsa.

9 Daftar hasil perhitungan BogoMips

Berikut adalah tabel yang memberikan laporan BogoMips pada beberapa sistem. Perhatikan bahwa penilaian di sini diambil dari nilai yang ditampilkan Linux saat boot, kecuali pada bagian sistem non-Linux.

9.1 Sistem 386 yang konfigurasinya kacau atau jelek.

System	BogoMips	Reporter
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 Sistem 386 normal: SX, DX, Nexgen

System	BogoMips	Reporter
386SX/8 undercl	1.04	Andrew Costa <c_chaos@wahnapitae.on.ca>
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>

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.cs>
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 Sistem 486 yang konfigurasinya kacau atau jelek

System	BogoMips	Reporter
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.nouucp>
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 Sistem 486 yang normal

System	BogoMips	Reporter
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>
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		33.20	Arnd Gehrmann <arnd@rea>
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>
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 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	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	66.44	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 Variasi 486 yang normal: Cyrix/IBM, UMC

System	BogoMips	Reporter
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	21.50	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>
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 Sistem Pentium yang konfigurasinya kacau atau jelek

System	BogoMips	Reporter
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>
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 Sistem Pentium yang Normal

System	BogoMips	Reporter
Pentium/60	23	Chien-An Chen <giant@nwu.edu>
Pentium/60	23.96	Joost Helberg <jhelberg@nlsun8.oracle.nl>
Pentium/60	23.96	Ulf Tietz <ulf@rio70.bln.sni.de>
Pentium/60 Gateway	23.96	Manoj Kasichainula <mvkasich@eos.ncsu.edu>
Pentium/60	23.96	Pierre Frenkiel <frenkiel@cdfap1.in2p3.fr>
Pentium/60	23.96	Tim Oosterbroek <tim@astro.uva.nl>
Pentium/60 NCR 3455	24	Mathias Koerber <mathias@solomon.technet.sg>
Pentium/60	24	Joe Sloan <jjs@engr.ucr.edu>
Pentium/60	24.0	Mark H. Wood <mwood@indyvax.iupui.edu>
Pentium/60	24.13	R.M. van Rijswijk <rijswijk@cs.utwente.nl>
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 Intel	29.79	Scott M. Grim <sgrim@netwalk.com>
Pentium/75	29.95	Steve Martin <smartin@mrg.uswest.com>
Pentium/75	30.22	Zoran Marjanski <bagzor@enterprise.ca>
Pentium/75	30.22	Andrew Buckby <c4ab1@dmu.ac.uk>
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>
Pentium/90	35.84	Jason Nunn <jsno@stormfront.com.au>
Pentium/90	35.88	Joe Anderson <CPJJA@ttacs3.ttu.edu>
Pentium/90	35.88	Warwick Allison <warwick@cs.uq.oz.au>
Pentium/90	35.94	Erik Walthinsen <omega@teleport.com>
Pentium/90	36	Joe Sloan <jjs@engr.ucr.edu>
Pentium/90	36	Larry Auton <lda@nfa.research.att.com>
Pentium/90	36	Richard Knipe <knipe@lobby.ti.com>
Pentium/90	36.0	Werner Almesberger <almesber@lrc.epfl.ch>
Pentium/90	36.06	Rob J. Nauta <rob@iaehv.nl>
Pentium/90	36.08	Leung Hon Wa <cshwleun@cs.citu.edu.hk>

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Pentium/90 Zeos          36.08  Chris Laurel <claurel@mr.net>
Pentium/90               36.08  Ronald Prague <ronp@fishnet.net>
Pentium/90               36.08  Adrian Blues <adrian@hypereality.co.uk>
Pentium/90               36.08  Pak Yin Tam "Fred" <ptam@eesun1.tamu.edu>
Pentium/90               36.08  Jason Heiss <jheiss@cco.caltech.edu>
Pentium/90               36.08  Tim Krantz <tek@dsinc.com>
Pentium/90 Gateway       36.08  Pete Stewart <stewart@bae.bellcore.com>
Pentium/90               36.08  Tom Manos <tmanos@infi.net>
Pentium/90               36.08  Richard Mundell <R.Mundell@uea.ac.uk>
Pentium/90               36.08  NN <usenet@uxmail.ust.hk>
Pentium/90               36.08  Yavuz Batmaz <yavuzb@knidos.cc.metu.edu.tr>
Pentium/90               36.08  Alan Skelley <askelley@gpu.srv.ualberta.ca>
Pentium/90               36.08  Ralph Sims <ralphs@locus.halcyon.com>
Pentium/90               36.08  Julian Bradbury <julian@xabcs.demon.co.uk>
Pentium/90               36.08  Dan Langrill <langrlld@mussel.cig.mot.com>
Pentium/90               36.08  Ravi Krishna Swamy <rkswamy@eos.ncsu.edu>
Pentium/90               36.08  J.L. Brothers <brothers@halcyon.com>
Pentium/90 Micronics     36.09  Andrew Brown <andrewbrown@acm.org>
Pentium/90               36.27  Giao H. Phan <giao@concrete.resnet.upenn.edu>
Pentium/90 Plato         36.4   Joe Valenzuela <smarm@ibm.net>
Pentium/90               36.5   Mike Kelleher <mikejk@umfacad.maine.edu>
Pentium/90               36.9   Ted Gaunt <tgaunt@pms701.pms.ford.com>
Pentium/100 overcl       38.39  Stefan Onderka <stefan.onderka@metronet.de>
Pentium/100              39.52  Adrian Blues <adrian@hypereality.co.uk>
Pentium/100 overcl       39.73  Phil Howard <phil@clr.com>
Pentium/100              39.73  <Peter.Weiss@informatik.uni-oldenburg.de>
Pentium/100 0c           39.73  Jason Crawford <jasonc1@gramercy.ios.com>
Pentium/100 overcl       39.83  Stefan Onderka <stefan.onderka@metronet.de>
Pentium/100              39.93  Tom Miller <tvtom@en.com>
Pentium/100 Cyrix        39.94  Mike Holland <myk@cygnus.uwa.edu.au>
Pentium/100              39.94  KAZ Vorpal <kaz@upx.net>
Pentium/100 overcl       39.94  Donar G.E. Alofs <donar@cs.vu.nl>
Pentium/100              39.94  Larry Snyder <larry@trauma.iag.net>
Pentium/100              39.94  Ian Hill <ian@hecate.phy.queensu.ca>
Pentium/100              39.94  John Crawford <link@spu.edu>
Pentium/100              39.94  Jered <jered@mit.edu>
Pentium/100 overcl       39.94  Ian <irs2@tweedledum.amp.york.ac.uk>
Pentium/100              39.94  Brian McGhee <brianm@iceonline.com>
Pentium/100              39.94  M Skjelland <morten.skjelland@pvv.unit.no>
Pentium/100              39.96  Dan Kha <dkha@yorku.ca>
Pentium/100              39.98  Phillipe Charon <charron@ecoledoc.ibp.fr>
Pentium/100              40.03  <bon@elektron.ikp.physik.th-darmstadt.de>
Pentium/100              40.08  Ronny Spiegel <rspiegel@htwm.de>
Pentium/100              40.18  David Baldwin <davidb@exis.net>
Pentium/100              40.18  <habibie@catevr.fiu.edu>
Pentium/120 Cyrix        47.8   Simon Ho <simon@epsilon.win-uk.net>
Pentium/120              47.82  Jorge Juan-Chico <jjchico@imse.cnm.es>
```

```
Pentium/120 Cyrix       47.92  Joel N. Squire <squire@colorado.edu>
Pentium/120             47.93  Umberto d'Ortona <umberto@grenet.fr>
Pentium/120 Cyrix       47.93  Jim T. Polk <jtpolk@cris.com>
Pentium/120             47.93  Jon Trowbridge <trow@mcs.com>
Pentium/120             47.98  Craig Bates <cbates@psu.edu>
Pentium/120 Cyrix       48     Steve <horne@mhd2.pfc.mit.edu>
Pentium/120             48.00  Michael Wazenski <mwazenski@dsrnet.com>
Pentium/120 Intel       48.02  Scott M. Grim <sgrim@netwalk.com>
Pentium/120 Cyrix       48.27  Glenn T. Jayaputera <gjt@budgie.apana.org.au>
Pentium/120             48.27  Roman Mitnitski <mitnits@shany.net>
Pentium/120             48.27  Peter Walsh <pwalsh@rain.org>
Pentium/120 Cyrix       48.2   Viznyuk <sviznyuk@magnus.acs.ohio-state.edu>
Pentium/120             49.27  Simon Hargrave <simon@revell.demon.co.uk>
Pentium/133             53.04  Wayne Roberts <wroberts@aug.com>
Pentium/133             53.04  Gregory Travis <greg@indiana.edu>
Pentium/133 overcl      53.04  A. Kunigelis <algikun@santaka.sc-uni.ktu.lt>
Pentium/133 Intel       53.04  Jimmie Farmer <calvin@malchick.com>
Pentium/133             53.25  Chuck Mattern <cmattern@mindspring.com>
Pentium/133             53.26  Glenn Holt <gholt@lsil.com>
Pentium/133             53.26  Heikki Levanto <heikki@lsd.ping.dk>
Pentium/133             53.26  Chaim Tarshish <chaim@ipl.med.nyu.edu>
Pentium/133             53.26  Mitchell B. Hamm <hamm@one.net>
Pentium/133             53.26  Donald Lewis <dlewis@jackson.freenet.org>
Pentium/133             53.26  Jon Trowbridge <trow@kremlin.emccta.com>
Pentium/133             53.26  Charny Peete Mitchell <cpmiche@eos.ncsu.edu>
Pentium/133 256c        53.26  David Wuertele <dave@gctech.com>
Pentium/133 256c        53.68  Guiseppe Miceli <ferdy@ccii.unipi.it>
Pentium/133             53.68  Michael Kress <kress@hal.saar.de>
Pentium/150 Intel       59.80  Joel D. Young <jdyoung@afit.af.mil>
Pentium/150             60.01  Joost de Greef <joost@stack.nl>
Pentium/150 overcl      60.21  Duarte Cordeiro <l38404@alfa.ist.utl.pt>
Pentium/166             66.16  Pedro Soria-Rodriguez <sorrodp@wpi.edu>
Pentium/166             66.35  K. Visweswaran <kviswesw@lehman.com>
Pentium/166             66.44  Donald Lewis <dlewis@jackson.freenet.org>
Pentium/166             66.76  F. Baitinger <baiti@herrenberg.netsurf.de>
Pentium/166             67.10  Jon Trowbridge <trow@mcs.com>
Pentium/166             67.10  Dylan <dylan@ert.com>
Pentium/166 512c        67.10  Dirk Freese <freese@infra.de>
Pentium/200             79.66  Piete Brooks <Piete.Brooks@cl.cam.ac.uk>
Pentium/200             79.69  Timm Gleason <timm@bess.net>
Pentium/200             79.89  Dave S. Baker <dave@acedia.demon.co.uk>
Pentium/200             78.87  Nick D'Apice <ndapice@erols.com>
Pentium/200             81.92  Steve Baur <steve@xemacs.org>
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9.8 Variasi sistem Pentium yang normal: MMX, Pro, II, Cyrix, AMD

System	BogoMips	Reporter
Pentium MMX/133	265.77	Ron Peters <rpeters@f15fast.al.intel.com>
Pentium MMX/150	307.53	Sami Sihvonen <buggy@fix.no>
Pentium MMX/166 notebk	331.75	n.n. <visionary@aura.title14.com>
Pentium MMX/166	331.78	Rob Janssen <pe1chl@amsat.org>
Pentium MMX/166	331.78	Dave Page <dave@vale-housing.co.uk>
Pentium MMX/166	331.78	Matthew C. Sell <amtmcs@amsta.leeds.ac.uk>
Pentium MMX/166	333.41	Sjoelie <patrick@sjoel.xs4all.nl>
Pentium MMX/180	358.81	David Efflandt <efflandt@xnet.com>
Pentium MMX/200	398.13	Andy Saunders <andi@numenor.oucs.ox.ac.uk>
Pentium MMX/200	398.13	A. James Lewis <james@vrtx.net>
Pentium MMX/200	398.95	Reinhold J. Gerharz <rgerharx@erols.com>
Pentium MMX/200	398.95	Eric Beymer <beymer@soundex.com>
Pentium MMX/200	398.95	Duane Steel <dsteele@direct.ca>
Pentium MMX/200	400	Rob Jokinen <rjokinen@rt66.com>
Pentium MMX/200	400.59	Paul Black <paul@darwin.demon.co.uk>
Pentium MMX/200	400.59	Bart <bart@aceonline.com.au>
Pentium MMX/210 overcl	416.97	John Saunders <john@nlc.net.au>
Pentium MMX/225 overcl	448.92	Ingo Reimann <reimann@uni-muenster.de>
Pentium MMX/250 overcl	498.07	Maarten van Rossum <m@vr.xs4all.nl>
Pentium Pro/133	132.88	John D. Sundberg <jdsundberg@mmm.com>
Pentium Pro/150	149.50	Rogier Wolff <wolff@bitwizard.nl>
Pentium Pro/180	179.61	Chuck Fee <fee@ch4549.org>
Pentium Pro/200	197.42	Michael Griffith <grif@cs.ucr.edu>
Pentium Pro/200	197.42	Curtis Varner <carner@cs.ucr.edu>
Pentium Pro/200	198.84	Erik Max Francis <max@alcyone.com>
Pentium Pro/200	198.84	Marc Winkler <marcus@healthchex.com>
Pentium Pro/200	199.04	V. Bostrom <Vareck_Bostrom@ccm.jf.intel.com>
Pentium Pro/200	199.06	Justin Clancy <justin@hippos.demon.co.uk>
Pentium Pro/200	199.06	Glenn Lamb <mumford@netcom15.netcom.com>
Pentium Pro/200	199.06	Laszlo Herczeg <las@light-house.com>
Pentium Pro/200	199.07	Stefan <boresch@schuber.u-strasbg.fr>
Pentium Pro/200	199.07	Greg Fausak <lgfausak@august.com>
Pentium Pro/200	199.07	Chris Jones <chris@planetsymphone.com>
Pentium Pro/200	199.07	Matthew S. Crocker <matthew@crocker.com>
Pentium Pro/200	199.95	Reinhold J. Gerharz <rgerharx@erols.com>
Pentium Pro/200	200.32	Gil Megidish <gmegidis@ort.org.il>
Pentium Pro/200	200.32	Jose Navarro <jnavarro@aoc.nrao.edu>
Pentium Pro/200	200.32	<Eric_Zucker@om.hp.com>
Pentium Pro/200	200.32	Wayne Scott <wscott@ichips.intel.com>
Pentium Pro/200	200.32	Adrian L. Hosey <ahosey@cs.indiana.edu>
Pentium Pro/233 overcl	234.43	S. Curtarolo <auro@spiro.fisica.unipd.it>

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Pentium II/266          265.42  Jon Trowbridge <trow@kremlin.emccta.com>
Pentium II/266          265.44  Nick Ullman <nick@avenza.com>
Pentium II/266          267.06  James McKinnon <jmack@phys.ualberta.ca>
Pentium II/300 overcl   299.01  Martin Lathoud <nytral@endirect.qc.ca>

5x86/100 Cyrix          100.16  NN <root@anxa04.cc.ic.ac.uk>
5x86/100                100.19  Valient Gough <vgough@teton.mines.edu>
5x86/100 Cyrix          100.47  C.Chan <chan@alfrothul.uchicago.edu>
5x86/120 Cyrix P150+    119.60  Wynstan Tong <wynstan@eecg.toronto.ca>
5x86/120 Cyrix P150+    119.60  Joel N. Squire <squire@colorado.edu>
5x86/120 Cyrix P150+    119.83  Leland Olds <olds@eskimo.com>
5x86/120 Cyrix P150+    119.83  NN <root@anxa04.cc.ic.ac.uk>
5x86/120 Cyrix P150+    120.68  C.Chan <chan@alfrothul.uchicago.edu>
5x86/120 Cyrix P150+    122.01  Andre Coetzee <acoetzee@ctcc.gov.za>

6x86/100 Cyrix           99.42  Stig M. Valstad <svalstad@sn.no>
6x86/110 Cyrix P133+    109.77  Matthew Flint <matthew@philtrum.demon.co.uk>
6x86/110 Cyrix P133+    109.77  John Merriam <suprnaut@esslink.com>
6x86/110 Cyrix P133+    109.77  Keith Smith <keith@ksmith.com>
6x86/120 Cyrix P150+    119     Jean-Claude Gouiran <jcg13@ibm.net>
6x86/120 Cyrix P150+    119.60  Taso Lyristis <taso@remus.rutgers.edu>
6x86/120 Cyrix P150+    119.60  Hrvoje Stipetic <stipe@zemris.fer.hr>
6x86/120 Cyrix          119.60  Yakko J. Warner <yakko@wtower.com>
6x86/120 Cyrix P150+    119.60  B. James Philippe <bryan@terran.org>
6x86/120 Cyrix P150+    119.83  Roger Merchberger <zmerch@northernway.net>
6x86/120 Cyrix          119.83  Daniel Wold <danw@panix.com>
6x86/120 Cyrix          120     John C. Beasley <beaslej1@nevada.edu>
6x86/120 Cyrix P150+    120.01  Jay Thorne <jay@result.com>
6x86/120 Cyrix P150+    120.01  Jeawan Kim <jaewan@harc.edu>
6x86/120 Cyrix P150+    120.91  Cymen <cymen@ziplink.net>
6x86/133 Cyrix P166+    132.71  Holger Kemper <hok@balu.ping.de>
6x86/133 Cyrix P166+    132.71  Hrvoje Stipetic <stipe@zemris.fer.hr>
6x86/133 Cyrix P166+    132.82  Alex Liffers <aliffers@tartarus.uwa.edu.au>
6x86/133 Cyrix P166+    132.82  Brian C. Theobald <theobald@nortel.ca>
6x86/133 Cyrix P166+    132.88  Alvaro Lopes <alvieboy@utad.pt>
6x86/133 Cyrix P166+    132.88  Craig Andersen <andersen@fastlane.net>
6x86/133 Cyrix P166+    133.73  C. Drews <drews_c@informatik.fh-hamburg.de>
6x86/133 Cyrix P166+    133.12  Daniel Gritter <dgritt47@calvin.edu>
6x86/150 Cyrix P200+    149.50  Evan L. Schemm <elschemm@mtu.edu>
6x86/150 Cyrix P200+    149.50  Steven Rainwater <srainwater@ncc.com>
6x86/150 Cyrix P200+    149.91  Sid Boyce <szb50@amdahl.com>
6x86MX/166 Cyrix A-Step 166.71  David Anderson <rovaughn@infoave.net>

K5/75 AMD               149.91  Simon Karpen <slk@linux-shell.net>
K5/90 AMD               179.40  <root@krabi.mbp.ee>
K5/90 AMD               179.40  Ken Edwards <edwards@thor.xon.cuug.ab.ca>
K5/90 AMD               180.22  Hector DC Gonzalez <turbo@linux.lsl.com.mx>
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K5/90 AMD               181.00  Drew Golden <golden@platinum.nb.net>
K5/100 AMD PR133        198.66  Trond Solem <trond.solem@homemail.com>
K5/100 AMD PR133        199.07  Henri Jamgotchian <hjamgot@planete.net>
K5/100 AMD PR133        199.48  Dark Mind <root@dmh.ml.org>
K5/100 AMD PR133        199.88  J. Grassel <grassel@heart.cas.und.nodak.edu>
K5/100 AMD PR133        199.88  Berend Reitsma <berend@united-info.com>
K5/100 AMD PR133        200.29  Tilman Sommer <sommer@vsun02.ag01.kodak.com>
K5/100 AMD PR133        200.32  Carlo Politi <cpoliti@mare.gol.grosseto.it>
K5/100 AMD PR133        199.07  Franco De Angelis <fda@ied.unipr.it>
K5/100 AMD PR133        199.07  HaJo Simons <hajo@frodo.com>
K5/116 AMD PR166        233.47  Hans-Joachim Baader <hans@grumber.ika.de>
K5/120 AMD PR133 overcl 239.21  Chris Harshman <harshman@paradigm.uor.edu>

K6/166                  332.60  David Parsons <orc@pell.chi.il.us>
K6/166                  331     Bill Petersen <brp@cuberramp.net>
K6/200                  398.85  n.n. <uh886@freenet.victoria.bc.ca>
K6/200                  398.89  Ian Hanschen <hanschen@uwyo.edu>
K6/200                  399.77  Murtaza Amiji <murti@wpi.edu>
K6/200                  399.78  Dan Hetzel <dan@icor.fr>
K6/200                  400.58  Paco Culebras Amigo <paco@hades.udg.es>
K6/200                  400.59  Sverre H. Huseby <s.h.huseby@usit.uio.no>
K6/200                  400.59  Steve Conley <sconley@muck.leonine.com>
K6/200                  400.59  Mark Lehrer <edge@dux.raex.com>
K6/200                  400.59  Chris Esser <ksqueak@erols.com>
K6/200                  400.59  Federico Pellegrin <fede@triangolo.it>
K6/200                  400.59  Howard Poe <falcor@kingsnet.com>
K6/208 overcl           416.15  Jani Halme <jaadha@utu.fi>
K6/208 overcl           416.15  Donnie Savage <dsavage@cris.com>
K6/208                  417.97  J.F. Ursetto <ursetto@uiuc.edu>
K6/225                  440     n.n. <uh886@freenet.victoria.bc.ca>
K6/225 overcl           448.92  Paco Culebras Amigo <paco@hades.udg.es>
K6/225 overcl           450.56  M. Cramer <mccramer@stuttgart.netscape.de>
K6/233                  466.5   R. Garcia <rgarciaitt@aol.com>
K6/233 overcl           466.84  Francesco <root@fly.cnuce.cnr.it>
K6/233 overcl           466.94  Paco Culebras Amigo <paco@hades.udg.es>
K6/233                  466.94  Howard Poe  <hpoe@nyx.net>
K6/233                  466.94  Andreas Haumer <andreas@xss.co.at>
K6/233                  466.94  Damien Castelltort <eznerald@mail.mnet.fr>
K6/233                  466.94  G. Cantallops Ramis <gcantallopsr@jet.se>
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9.9 Sistem Alpha yang Normal

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System             BogoMips  Reporter
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               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 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>
```

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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>
21164A/533 PC164LX       530.57  Ronny Ranerup <ronny@axis.com>
21164A/600 PC164LX       595.59  L.F. Donaldson <donaldlf@cs.rose-hulman.edu>

21264A/400 Pass-1        794.82  Jay Estabrook <jay.estabrook@digital.com>
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9.10 Sistem Motorola yang normal

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System                BogoMips  Reporter
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 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>

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>
```

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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>
```

9.11 Sistem lain: Sparc, PowerPC, Mips, Intel 8088/286 ELKS

```
System                BogoMips  Reporter
Sparc Sun4c              17.94  J.L. Brothers <brothers@halcyon.com>
Sparc SLC/20 S1          19.86  Simon Karpen <slk@linux-shell.net>
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 hSparc/150 Sun4m  150.32  Tethys <tethys@ml.com>
Sparc Ultra1 sun4u      284.05  Iban Cardona <icc@seric.es>

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 604/133 MOT PS  266.24  Christopher Harrel <cnh@eng.mindspring.net>
PowerPC 604/150 Mac9500 297.73  Jean-Phillips Lord <jpl@binex.com>
PowerPC 604/200 Mac8600 320     Julien Sebot <sebot@lri.fr>

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>
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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 286/8 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 Sistem Multi CPU yang normal

System	BogoMips	Reporter
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/166	133.53	<Reinhard.Simkovics@jk.uni-linz.ac.at>
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.dtsm.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	398.14	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	398.6	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>

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SMP2 Pentium Pro/200    400.18  Attila Karpati <karpati@cs.elte.hu>
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>
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9.13 Sistem Non-Linux (untuk referensi)

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System                      OS      BogoMips Reporter
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>
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>
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>
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>
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>
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>
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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>
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>
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>
Alpha	OSF1	180.0	<mauger@ensinfo.univ-nantes.fr>
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>
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 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>

10 Signatur

Roderick dan Isolde adalah dua sahabat: Walaupun Roderick baru bisa mengucap tiga kata saja (Op, Open, Papa), ia bersikeras untuk mengikuti kakaknya dalam menyanyikan lagu sinterklas dan natal.

Met vriendelijke groeten, Wim van Dorst.

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-----------------------------------------------------------------
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(-:      baron@clifton.hobby.nl       WvD@Chem.AkzoNobel.nl      :-)
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