
Subject: Re: time test MacOC

Posted by [gurman](#) on Sun, 15 Mar 1998 08:00:00 GMT

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In article <pford-1403981814480001@news.texas.net>, pford@bcm.tmc.edu
(Patrick Ford, MD) wrote:

> These are the time test results for a PPC upgraded with a PowerLogix
> board, G# processor 308 MHz, 1 Mbyte backside cache 1:1, 44MHz system bus,
> MacOS 8.1 with many extensions. I could probably tweak the speed somewhat
> by using only one display card and a better display card and SCSI 3 card
> and drives. I am using inexpensive SCSI 1 drives.

>

[individual test results snipped]

> 3.43333=Total Time, 0.099091732=Geometric mean, 23 tests.

> IDL> TIME_TEST2

> 14.5333=Total Time, 0.24510466=Geometric mean, 23 tests.

> IDL> TIME_TEST3

> 26.0333=Total Time, 0.47938677=Geometric mean, 23 tests.

>

FWIW, the following are IDL 5.0.2 time test results on a Power
Computing Poer Center Pro 210 (210 MHz 604e, 60 MHz bus speed, 1 Mbyte L2
cache, cheap Ultra SCSI narrow drive):

IDL> time_test

|TIME_TEST performance for IDL 5.0.2:

| OS_FAMILY=MacOS, OS=MacOS, ARCH=PowerMac

- 1 0.250000 Empty For loop, 1 million times
- 2 0.316667 Call empty procedure (1 param) 100,000 times
- 3 0.150000 Add 100,000 integer scalars and store
- 4 0.183333 25,000 scalar loops each of 5 ops, 2 =, 1 if
- 5 0.116667 Mult 512 by 512 byte by constant and store, 10 times
- 6 0.116667 Shift 512 by 512 byte and store, 10 times
- 7 0.133333 Add constant to 512 x 512 byte array and store, 10 times
- 8 0.216667 Add two 512 by 512 byte images and store, 10 times
- 9 0.566667 Mult 512 by 512 floating by constant and store, 10 times
- 10 0.633333 Add constant to 512 x 512 floating and store, 10 times
- 11 0.816667 Add two 512 by 512 floating images and store, 10 times
- 12 0.066667 Invert a 100 by 100 random matrix
- 13 0.200000 Transpose 256 x 256 byte, FOR loops
- 14 0.016667 Transpose 256 x 256 byte, row and column ops
- 15 0.016667 Transpose 256 x 256 byte, transpose function
- 16 0.466667 Log of 100,000 numbers, FOR loop
- 17 0.050000 Log of 100,000 numbers, vector ops
- 18 0.400000 Add two 100000 element floating vectors, FOR loop
- 19 0.016667 Add two 100000 element floating vectors, vector op
- 20 0.150000 65536 point real to complex FFT

21 0.0500000 Smooth 512 by 512 byte array, 5x5 boxcar
22 0.0666667 Smooth 512 by 512 floating array, 5x5 boxcar
23 0.466667 Write and read 10 512 by 512 byte arrays
5.46667=Total Time, 0.14236112=Geometric mean, 23 tests.

IDL> time_test2

|TIME_TEST2 performance for IDL 5.0.2:

| OS_FAMILY=MacOS, OS=MacOS, ARCH=PowerMac

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1 0.466667 Empty For loop, 2000000 times
2 0.316667 Call empty procedure (1 param) 100,000 times
3 0.166667 Add 100,000 integer scalars and store
4 0.183333 25,000 scalar loops each of 5 ops, 2 =, 1 if)
5 0.133333 Mult 512 by 512 byte by constant and store, 10 times
6 1.23333 Shift 512 by 512 byte and store, 100 times
7 0.683333 Add constant to 512 x 512 byte array and store, 50 times
8 0.733333 Add two 512 by 512 byte images and store, 30 times
9 1.68333 Mult 512 by 512 floating by constant and store, 30 times
10 1.76667 Add constant to 512 x 512 floating and store, 40 times
11 2.88333 Add two 512 by 512 floating images and store, 30 times
12 0.116667 Generate 225000 random numbers
13 0.250000 Invert a 150 by 150 random matrix
14 0.0500001 LU Decomposition of a 150 by 150 random matrix
15 0.266667 Transpose 256 x 256 byte, FOR loops
16 0.250000 Transpose 256 x 256 byte, row and column ops x 10
17 0.250000 Transpose 256 x 256 byte, TRANSPOSE function x 10
18 0.400000 Log of 100,000 numbers, FOR loop
19 0.0500001 Log of 100,000 numbers, vector ops
20 1.01667 131072 point forward plus inverse FFT
21 0.450000 Smooth 512 by 512 byte array, 5x5 boxcar, 10 times
22 0.116667 Smooth 512 by 512 floating array, 5x5 boxcar, 2 times
23 6.23333 Write and read 512 by 512 byte array x 20
19.7000=Total Time, 0.39464166=Geometric mean, 23 tests.

IDL> time_test3

|TIME_TEST3 performance for IDL 5.0.2:

| OS_FAMILY=MacOS, OS=MacOS, ARCH=PowerMac

| Sun Mar 15 01:01:08 1998

1 0.483333 Empty For loop, 2000000 times
2 0.300000 Call empty procedure (1 param) 100000 times
3 0.333333 Add 200000 integer scalars and store
4 0.450000 50000 scalar loops each of 5 ops, 2 =, 1 if)
5 0.383333 Mult 512 by 512 byte by constant and store, 30 times
6 3.55000 Shift 512 by 512 byte and store, 300 times
7 1.30000 Add constant to 512x512 byte array, 100 times
8 1.80000 Add two 512 by 512 byte arrays and store, 80 times
9 1.71667 Mult 512 by 512 floating by constant, 30 times
10 3.51667 Shift 512 x 512 array, 60 times
11 2.88333 Add two 512 by 512 floating images, 40 times
12 0.516667 Generate 1000000 random numbers

13 0.483333 Invert a 192^2 random matrix
14 0.166667 LU Decomposition of a 192^2 random matrix
15 0.466667 Transpose 384^2 byte, FOR loops
16 0.650000 Transpose 384^2 byte, row and column ops x 10
17 5.85000 Transpose 384^2 byte, TRANSPOSE function x 100
18 0.433333 Log of 100000 numbers, FOR loop
19 0.550000 Log of 100000 numbers, vector ops 10 times
20 1.01667 131072 point forward plus inverse FFT
21 0.516667 Smooth 512 by 512 byte array, 5x5 boxcar, 10 times
22 0.350000 Smooth 512 by 512 floating array, 5x5 boxcar, 5 times
23 14.0500 Write and read 512 by 512 byte array x 40
41.7667=Total Time, 0.88139225=Geometric mean, 23 tests.

The improvement with the G3 appears to be almost in proportion to the ratio of the clock speeds, but there are too many variables here (e.g. backside vs. motherboard L2, different IDL versions) to draw simple conclusions.... other than that I'll keep that \$1800 in my pocket for now, thanks.

Now if they come out with a 400 MHz copper G4 card next year that will work in the PC Pro..... I know, dream on.

Cheers,

Joe Gurman

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