
Subject: IDL Benchmark Anomaly

Posted by [MindSpring User](#) on Thu, 11 Nov 1999 08:00:00 GMT

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Greetings,

I saw the IDL benchmark tests and couldn't resist a run through of my 233 Mhz PII laptop vs my Dual Xeon Linux box. The results were much like I expected.

In TIME_TEST3

Xeon: 7.06824=Total Time, 0.25336439=Geometric mean, 22 tests.
laptop: 28.4500=Total Time, 0.87814925=Geometric mean, 22 tests.

In disc access:

Xeon: 0.346815 1 Write and read 512 by 512 byte array 40 times.
laptop: 1.21000 1 Write and read 512 by 512 byte array 40 times.

But in the graphics test the laptop killed the Xeon even though the Xeon has a 32 Mb state of the art video card (Nvidia TNT). Any ideas why? I would have expected it to win this by two to one not lose it. I'm sure the result is valid as I could visibly see a difference in the draw speeds. Has anyone else seen this? Do I need to tune IDL on linux or my X-Server?

Xeon: 58.8926=Total Time, 1.7327737=Geometric mean, 8 tests.
laptop: 21.2100=Total Time, 2.0917758=Geometric mean, 8 tests.

Full tests below.

***** TESTS *****

Running Tests, Please Standby...

% Compiled module: TIME_TEST3.

|TIME_TEST3 performance for IDL 5.2.1L:

| OS_FAMILY=unix, OS=linux, ARCH=x86

| Thu Nov 11 14:18:27 1999

```

1  0.141545 Empty For loop, 2000000 times
2  0.151196 Call empty procedure (1 param) 100000 times
3  0.181190 Add 200000 integer scalars and store
4  0.171662 50000 scalar loops each of 5 ops, 2 =, 1 if)
5  0.108775 Mult 512 by 512 byte by constant and store, 30
times
6  0.873211 Shift 512 by 512 byte and store, 300 times
7  0.361537 Add constant to 512x512 byte array, 100 times
8  0.341331 Add two 512 by 512 byte arrays and store, 80 times
9  0.347781 Mult 512 by 512 floating by constant, 30 times
10 0.643307 Shift 512 x 512 array, 60 times
11 0.568903 Add two 512 by 512 floating images, 40 times
12 0.185209 Generate 1000000 random numbers
13 0.176392 Invert a 192^2 random matrix
14 0.0710169 LU Decomposition of a 192^2 random matrix
15 0.180727 Transpose 384^2 byte, FOR loops
16 0.264680 Transpose 384^2 byte, row and column ops x 10
17 1.01350 Transpose 384^2 byte, TRANSPOSE function x 100
18 0.195215 Log of 100000 numbers, FOR loop
19 0.375858 Log of 100000 numbers, vector ops 10 times
20 0.369850 131072 point forward plus inverse FFT
21 0.240890 Smooth 512 by 512 byte array, 5x5 boxcar, 10 times
22 0.104464 Smooth 512 by 512 floating array, 5x5 boxcar, 5
times

```

Skipped read/write test

7.06824=Total Time, 0.25336439=Geometric mean, 22

tests.

% Compiled module: GRAPHICS_TIMES3.

% Compiled module: DIST.

|GRAPHICS_TIMES3 performance for IDL 5.2.1L:

| OS_FAMILY=unix, OS=linux, ARCH=x86

| Thu Nov 11 14:18:34 1999

```

1  7.15077 Simple plot, 30 times
2  9.06600 1000 vectors x 100
3  37.8072 Polygon filling
4  2.64451 Display 512 x 512 image, 10 times
5  0.705706 Surface 128x128, 2 times
6  1.05937 Shaded surface 128x128, 2 times
7  0.418945 Hershey strings X500
8  0.0400330 Hardware font strings X1000

```

58.8926=Total Time, 1.7327737=Geometric mean, 8

tests.

|I/O performance

% Compiled module: FILEPATH.

0.346815 1 Write and read 512 by 512 byte array 40 times.

__IS2R+

Thu Nov 11 14:19:34 1999

x86:linux:unix:5.2.1L:Aug 2 1999
TrueColor 24
Dell Inspiron Xeon
550
1000
32
Linux RH 6.0
321284 253364
7361572 1732774
346815
1761436
__IS2R- :w

***** Laptop Starts Here

Welcome to IDLSPEC II. For best results, quit all other
running programs before continuing.

***** SYSTEM DESCRIPTION *****

Please answer a few questions concerning your system. If you don't
know the answer or to skip a question, just hit return.

Computer's Make and Processor Type (not speed): DEC HiNote Ultra 2000
PII
Processor Speed, in MHZ (for more processors use, e.g., 4x500): 233
Amount of RAM, in MB: 144
Video Hardware: 4
Any other OS/System Info: Laptop 4Mb Video

***** REVIEW DESCRIPTION *****

Make+Processor: DEC HiNote Ultra 2000 PII
Speed: 233 MHz
Ram: 144 MB
Video Hardware: 4
Other Info: Laptop 4Mb Video

Is this information correct? [Y]/N Y

***** CURRENT DIRECTORY *****

==>C:\RS\IDL52

If this is not on a fast local drive (e.g. it's over the network)
or is not write accessible, enter another test directory.
(Maybe try C:\) [C:\RS\IDL52]:

***** TESTS *****

Running Tests, Please Standby...

% Compiled module: TIME_TEST3.

|TIME_TEST3 performance for IDL 5.2.1:

| OS_FAMILY=Windows, OS=Win32, ARCH=x86

| Thu Nov 11 16:29:06 1999

1	0.550000	Empty For loop, 2000000 times
2	0.280000	Call empty procedure (1 param) 100000 times
3	0.270000	Add 200000 integer scalars and store
4	0.220000	50000 scalar loops each of 5 ops, 2 =, 1 if)
5	0.770000	Mult 512 by 512 byte by constant and store, 30 times
6	5.33000	Shift 512 by 512 byte and store, 300 times
7	2.58000	Add constant to 512x512 byte array, 100 times
8	2.30000	Add two 512 by 512 byte arrays and store, 80 times
9	1.54000	Mult 512 by 512 floating by constant, 30 times
10	3.18000	Shift 512 x 512 array, 60 times
11	2.64000	Add two 512 by 512 floating images, 40 times
12	0.440000	Generate 1000000 random numbers
13	0.880000	Invert a 192^2 random matrix
14	0.710000	LU Decomposition of a 192^2 random matrix
15	0.380000	Transpose 384^2 byte, FOR loops
16	0.820000	Transpose 384^2 byte, row and column ops x 10
17	1.49000	Transpose 384^2 byte, TRANSPOSE function x 100
18	0.330000	Log of 100000 numbers, FOR loop
19	0.770000	Log of 100000 numbers, vector ops 10 times
20	1.59000	131072 point forward plus inverse FFT
21	0.990000	Smooth 512 by 512 byte array, 5x5 boxcar, 10 times
22	0.390000	Smooth 512 by 512 floating array, 5x5 boxcar, 5 times

times

Skipped read/write test

28.4500=Total Time, 0.87814925=Geometric mean, 22

tests.

% Compiled module: GRAPHICS_TIMES3.

% Compiled module: DIST.

|GRAPHICS_TIMES3 performance for IDL 5.2.1:

| OS_FAMILY=Windows, OS=Win32, ARCH=x86

| Thu Nov 11 16:29:35 1999

1	1.10000	Simple plot, 30 times
2	3.02000	1000 vectors x 100
3	6.70000	Polygon filling
4	2.20000	Display 512 x 512 image, 10 times
5	4.01000	Surface 128x128, 2 times
6	1.43000	Shaded surface 128x128, 2 times
7	2.14000	Hershey strings X500
8	0.610000	Hardware font strings X1000

21.2100=Total Time, 2.0917758=Geometric mean, 8

tests.

I/O performance

% Compiled module: FILEPATH.

1.21000 1 Write and read 512 by 512 byte array 40 times.

To enter this result, email the following text to:

idlspec@astro.cornell.edu

Be sure to include all text between the lines of +'s

+++++

__IS2R+

Thu Nov 11 16:29:58 1999

x86:Win32:Windows:5.2.1:Jun 4 1999

TrueColor 16

DEC HiNote Ultra 2000 PII

233

144

4

Laptop 4Mb Video

1293182 878149

2651250 2091776

1210000

6419264

__IS2R-