In Article <gurman-1904952039240001@arrowroot.gsfc.nasa.gov>,
gurman@uvsp.gsfc.nasa.gov (Joseph B. Gurman) wrote:
> <snip>
>   For what it's worth, with an unreleased beta version of IDL for the Power
> Macintosh, we get:
>
>   PowerMac 8100/80   48 Mbyte   System 7.5.1   20.9 s
>
> Frankly, I think disk speed is a big factor in these, as the Power Mac figures
> (test 23 = 7.38 s) shows in comparison to say, the 3000/600 running OSF/1
> (test 23 = 0.82 s). The OpenVMS systems also have extra overhead in disk
> writing (test 23 = 2.53 s on the 3000/900, 6.95 s on the 4000/710), but
> you supposedly get a more reliable file system in return. In fairness, the
> PowerMac disk I/O is still done in emulation.
>
>   Joe
>
> P.S. Bet our PowerMac cost less than your Indy, though.... It certainly
> cost about a factor of 3 less than the DEC 3000/400.
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> | Federal employees are still prohibited from holding opinions while at work.
Any opinions expressed herein must therefore be someone else's. |

Be aware that time_test for the Power Macs, and probably for a lot of other
processors is dependent on more than just processor, raw memory, clock
speed, and disk speed. I had an opportunity to try out IDL in a class on a
Power Mac 6100 with 16 Mbytes of memory. Experimenting with time_test
showed that it also depended on whether

1. It was run the first or latter time. On the first time you had
additional disk accesses and compilation to deal with so that the second run
was significantly faster.

2. The disk cache and program had adequate memory set aside (critical on a
16 Mbyte machine as the version of IDL reccomends 10 Mbytes + for IDL
alone). If the cache was large enough, disk access was less of a problem.

3. Graphics were written to a buffer for updating. Without the buffer you
had some problems with the appearance of windows ;-), but about twice the
nominal graphics performance.

4. Modern Memory manager and Virtual memory were used.

5. Sometimes performance would change with configuration in a nonobvious way, resulting in a factor of four or more degradation in performance.

6. Whether the beta or older non beta version was used. The beta version was typically more stable and faster than the nonbeta version, but could not run a few of the files.

For the record, with graphics buffering, a beta version of IDL on the 6100 Power PC, for the first run of time test I remember getting results between 30 and 70 s, for the second run between 17 and 70 s. The non-beta version was 25-50% slower. A 90 MHz Pentium nearby was reporting about 16 s, and over twice the graphics performance. Most of the performance was determined by the disk intensive routines, which varied by over an order of magnitude depending on the cache, etc. settings. I recall test 23 taking 3-4 seconds with the optimum setting on the second run, and more than 20 seconds on the worst setting.

In the class itself, where routines were applied to arrays that could never fit in the disk cache on a 16 Mbyte machine, performance was at best a factor of two worse than the Suns and PCs. It was also significantly less stable than the Suns with most of the problems due to memory conditions, but also had problems with directories on CD-ROMs where it would try to perform a write operation ;-) andd bomb instead of failing gracefully. It appeared to also be less stable than the PCs, but the PCs also bombed a number of times.

I do not recomend running IDL on a 16 Mbyte Power Mac, 24 Mbytes may be adequate, but you can never have too much memory.

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