Subject: Re: IDL i/o on G4
Posted by John-David T. Smith on Thu, 15 Mar 2001 01:14:58 GMT
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"Dmitri A. Sergatskov" wrote:
>
> Looking at IDLSPEC2 numbers for Macs (G4 in particular), it appears that
> I/O performance is abysmal. Does anyone have an insight why would it
> be so bad? The STREAM benchmark suggests that it should not be a generic
> G4/MacOS problem.
>

Not sure if I addressed this on the page... the current suite of IDL tests as presented in time_testn library routines do not sufficiently tax the I/O hardware subsystems. The scatter you see in timings results almost entirely from caching policies of the underlying OS (with the on-board caching of modern harddrives a secondary complication). That is, some of these OS's are not actually physically comitting bytes to disk, but caching them in memory (which is a perfectly acceptable practice).

As it happens, MacOS has a pretty pitiful caching policy, which is pretty well known. I imagine if those numbers were replotted under MacOSX, it would line up reasonably well with other OS's. I also imagine doing heavy duty I/O where your cache policy is irrelevant would equalize things (though I'd suspect the MacOS I/O subsytem would still suffer).

One other thing to remember: the speed advantages of G4's Altivec unit are not built into the IDLSpec2 survey, since they were introduced in version 5.4.

I had promised an update to IDLSpec which addressed these and other issues. Perhaps this summer. In the meantime, it seems the standard time test suite RSI distributes doesn't do exactly what we want. Certainly the I/O testing can be improved and made more real-world applicable. Perhaps OpenGL performance can also be addressed.

I'm always open to suggestions on this, but I can't promise anything new in the near term.

JD