Subject: Re: Object graphics under Linux: are they supposed to be that slow?
Posted by karl_schultz on Wed, 30 Jan 2002 18:23:09 GMT
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David Fanning <david@dfanning.com> wrote in message
news:<MPG.16c12aa8f85252b59897e1@news.frii.com>...
> Mark Hadfield (m.hadfield@niwa.co.nz) writes:
>
>> The configurations are:
>>
>>   * IDL 5.5 on Windows 2000 using RENDERER=0 (hardware)
>>   * IDL 5.5 on Windows 2000 using RENDERER=1 (software)
>>   * IDL 5.5 on Linux. This uses RENDERER=0 but, as is obvious from
>>   the DeviceInfo string, the rendering is carried out by the Mesa
>>   software library and does not access any hardware acceleration
>>
>> The geometric-mean elapsed time figure provides a rough ranking of the
>> configurations:
>>
>>   Windows RENDERER=0   4.58 s
>>   Windows RENDERER=1   3.11 s
>>   Linux   5.55 s
>
> Just to give you something to chew over, Mark. Here are
> my results with IDL 5.5 on Windows 2000, with a 32MB
> NVIDIA GeForce 2GTS graphics card. Screen resolution
> is 1280 by 1024 at 32 bits True-Color.
>
>   Windows RENDERER=0   0.71 s
>   Windows RENDERER=1   1.34 s
>
> That graphics card was a couple of hundred bucks, as
> I recall. :-)
>
> Cheers,
>
> David

Here's another data point:

PIII 750Mhz Windows NT 4.
nVidia RIVA TNT2 AGP SSE. 32 bits/pixel

I'd characterize this graphics card as a medium-low range card today.
The driver uses the AGP port, which is good, and apparently leverages
the Intel SSE instructions, which is also good.

Windows RENDERER=0   9.41 s

Windows RENDERER=1   2.72 s

The hardware was MUCH slower at image operations. (GL is generally
not a good image processor) In fact, I had to disable the image
STRETCH test because it was taking way too long. The hardware really
only beat out the software at texture-mapped polygons. I suppose that
this hardware/driver package was tuned for the Quake-like games :-).
(I should check for a driver update)

While this is a great benchmark, it may not be representative of
typical IDL application usage of graphics. For example, I might think
that this test is a little heavy on images. This program was written
to monitor the object graphics performance during development and
later modification and so hits most aspects of object graphics.
Therefore this program probably isn't the best means to select a card
or even in deciding between hardware and software rendering. Looking
at the individual test results can help a bit more if you know what
sort of things you are drawing a lot.

For example, in this case, removing the image tests would probably
bring the hardware and software numbers closer together.   And that
would be important to me if my programs didn't use IDLgrImage very
much.

Karl
RSI