Subject: iTools hardware rendering
Posted by sjwelch on Mon, 25 Feb 2008 23:43:56 GMT

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Greetings all,

I'm having a string of problems relating to hardware rendering in IDL
itools:

Before I start, system specs are as follows:
Hardware: Dual-core P4 @ 3Ghz, 2GB, 256MB ATI Radeon X600
Software: IDL 6.3 on Windows XP Pro, ATI Catalyst Driver 08.2 (and an
earlier version..)

I noticed that my CPU usage was maxed out (at least in one core) when
using interactive itools, this wasn't a problem as the software
rendering was still fast enough to use interactively. This was for an
iplot 3D scatterplot of around 50,000 points (lidar point clouds if
anyone's curious :). Now I needed to visualise around 1-2 million
points. Software rendering was not going to cut it.

Just for comparison a colleague, using an indentical machine, working
in R (which uses OpenGL for its 3D stuff) under Win XP can smoothly
pan and rotate a visualisation of around 2 million points.

I read: http://www.dfanning.com/ographics_tips/slowrendering.html and
made corresponding changes in the IDL preferences window. This didn't
change anthing.

I then upgraded my video drivers to the latest version. No help there,
same speed and CPU usage as in software. In fact that made things
worse. Now I repeatedly get the following error when I mouse over the
plot:

Program caused arithmetic error: Floating illegal operand

Everthing works fine, but slow when I force software mode.

So, conclusions I'm drawing from all this:
IDL is managing to pass the rendering to OpenGL, but thats as far as
its going: whatever software OpenGL renderer ATI has supplied is being
used. The OpenGL software renderer I've now upgraded to is somehow
incompatible with IDL and spits erroneous data back to it, leading to
the error message.

Given that I'm stuck with this hardware and this operating system, any
ideas what I should do next?
(except for smart ones like, "just use R then" ;)

Thanks!
-Sam