Subject: Re: Windows XP memory limitation?
Posted by Robert Moss on Fri, 05 Dec 2003 13:10:47 GMT
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This is a well known limitation of Windows. See the following Tech Tip:

http://www.rsinc.com/services/techtip.asp?ttid=3346

Robert Moss

David Yip wrote:
> The code that I'm working on is dying with a "Unable to allocate
> memory: to make array." in MESH_SURFACEAREA. It dies when the machine
> has allocated a little over 800MB of memory. Why does it do that?
> I've tried it on two different windows machines with 4GB and 2GB of
> RAM respectively. So there should be plenty of RAM available. It
> doesn't run into this problem under Linux or on a Mac. Is there some
> sort of RAM limitation with IDL under Windows?
>
> thanks,
> David

Subject: Re: Windows XP memory limitation?
Posted by David.Chevrier on Fri, 05 Dec 2003 18:38:52 GMT
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i came across this problem too even though I have 4gb of ram. it has
to do with all 32-bit versions of windows only allowing about a 1gb
for programs to run. its more complex than just that, but you can
read about it here
http://www.rsinc.com/services/techtip.asp?ttid=3346
http://www.rsinc.com/services/techtip.asp?ttid=3512

i found that adding /PAE switch to the boot.ini file helps get me a
little bit more memory.

your options are to switch to a 64-bit version of windows, switch to
another OS, or to be much more memory efficient, such as using the
temporary function appropriately and making sure you delete variables
you are no longer using. see david fanning's site
http://www.dfanning.com/tips/delete_all_vars.html
a slight modification of it to get only one variable to be erased is
PRO disappear, getRidOfMe
END
and call it from your program as
disappear, temporary(largeArrayToDelete)

if your using mesh commands, try conserving memory like this
verts=MESH_SMOOTH(TEMPORARY(verts),conn)
hope that helped
-dave

Subject: Re: Windows XP memory limitation?
Posted by David Fanning on Fri, 05 Dec 2003 19:31:31 GMT
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David Chevrier writes:

> your options are to switch to a 64-bit version of windows, switch to
> another OS, or to be much more memory efficient, such as using the
> temporary function appropriately and making sure you delete variables
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> END
> and call it from your program as
> disappear, temporary(largeArrayToDelete)

Actually, I think what you are looking for is UNDEFINE:

http://www.dfanning.com/variable_undefine.html

Cheers,

David

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Coyote's Guide to IDL Programming: http://www.dfanning.com/
Toll-Free IDL Book Orders: 1-888-461-0155

Subject: Re: Windows XP memory limitation?
Posted by dcw_yip on Mon, 08 Dec 2003 18:38:54 GMT
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Thanks everyone for the responses. Unfortunately none of them worked.
Contrary to what RSI says, there must be a built in memory limitation
or bug in IDL. I'm running 6.0 by the way. Once IDL crashes out with
the memory error, if I type in "BYTARR(120000000)" in the command

window I get "Unable to allocate memory: to make array." Even though I still should have about 2GB of RAM available. I'm using the /3GB flag in XP Pro. But if I try to allocate the same amount of memory in C using "malloc(120000000)" it works just fine. This is while IDL is in it's crash state. So there is that much available memory available in the system. In fact if I use "malloc(1200000000)" in C it still works. That's 10 times the amount of memory that fails under IDL under the same conditions.

David

Subject: Re: Windows XP memory limitation?
Posted by Karl Schultz on Tue, 09 Dec 2003 16:23:29 GMT
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"David Yip" <dcw_yip@yahoo.com> wrote in message news:201431cc.0312081038.47b3503e@posting.google.com...
> Thanks everyone for the responses. Unfortunately none of them worked.
> Contrary to what RSI says, there must be a built in memory limitation
> or bug in IDL. I'm running 6.0 by the way. Once IDL crashes out with
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> in the system. In fact if I use "malloc(1200000000)" in C it still
> works. That's 10 times the amount of memory that fails under IDL
> under the same conditions.

There's still a big difference in the largest contiguous block of memory that you can allocate from a stand-alone C program, a Win32 application, and a Win32 application with MFC. If you build your C test program as a Win32 app with MFC, I doubt that it will be able to allocate a contiguous block as big as a simple console app can.

You may also want to read the thread "Memory Headaches" posted to this newsgroup starting Aug 1, 2002. There is a lot more detail in the thread and some mention of some tools you can use to determine what is fragmenting your memory space.

IDL has no self-imposed memory limitations that might be responsible for your observations.

Karl
