
Subject: Re: Disappearing Object Graphics...

Posted by [David Fanning](#) on Sun, 24 Feb 2002 03:13:51 GMT

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Ted Cary (tedcary@yahoo.com) writes:

- > I Googl-ed all the old postings about disappearing object graphics, and
- > after spending the last few days trying out the suggestions I still
- > haven't found a solution. I'm using object graphics in 2D.

I really don't know, Ted. But I *do* know that whenever I see something really, really weird I've learned to turn the software renderer on. Could this be the problem?

Cheers,

David

--

David W. Fanning, Ph.D.

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Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

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Subject: Re: Disappearing Object Graphics...

Posted by [Ted Cary](#) on Sun, 24 Feb 2002 17:30:25 GMT

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- >
- > I really don't know, Ted. But I *do* know that whenever
- > I see something really, really weird I've learned to
- > turn the software renderer on. Could this be the problem?

At least someone agrees it's weird. I thought I was going insane, or else that I was missing something obvious. But the renderer is not the problem. I've tried all combinations of RENDERER and RETAIN, and in fact the problem first showed up with the software renderer on. I'm scared now to use `IDLgrWindow::GetProperty` to retrieve the renderer number--probably it is `-Pi`. Anyway, I think I read somewhere that MACs always use the software renderer--not sure of this, though.

At least I solved the speed problem I was having, but I'm not sure the solution is newsgroup-worthy. After running PROFILER (thanks Rick Towler), I noticed dozens of calls to `BYTARR` that did not make sense. Sure enough, there was a forgotten and useless line of code using `IDLgrImage::GetProperty` to retrieve the image data with every `Widget_Draw` motion event, probably

left over from some image check I was doing during debugging. After removing that line the object graphics program runs faster now than the old direct graphics version. I was pretty pleased with myself until things started disappearing.

Subject: Re: Disappearing Object Graphics...

Posted by [Mark Hadfield](#) on Sun, 24 Feb 2002 23:14:05 GMT

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"Ted Cary" <tedcary@yahoo.com> wrote in message news:3C78492A.B7F0D8E1@yahoo.com...

> ...I've tried increasing the z-coordinate of vertices to bring ROIs
> to the front, and this occasionally works, although just as often
> decreasing the z-coordinate to a negative value works instead.
> Eventually I usually can find an xy-plane on which an individual ROI
> is visible, but it's beginning to look like the only way to draw all
> the ROIs is to put each one on a different plane with a different
> z-coordinate, which seems ridiculous since I'm only working on one
> plane. Why is any of this z-coordinate manipulation ever necessary
> when working in 2D?

Because Object Graphics is deeply and intrinsically 3D.

It does seem you have some sort of vertical-overlap issue. But I don't understand why IDLgrROI objects should obscure one another (except when they have exactly the same coordinates) because they are represented by polylines or points, not polygons.

This may be a bug.

By the way, the vertical separation required for reliable overlap control with object graphics is approx. 2^{16} times the distance between front and rear clipping planes. But it does vary with the renderer.

> Just for kicks, I've also tried every combination of RETAIN and
> RENDERER

You did this for kicks? You are a sick boy.

Mark Hadfield
m.hadfield@niwa.co.nz <http://katipo.niwa.co.nz/~hadfield>
National Institute for Water and Atmospheric Research

Subject: Re: Disappearing Object Graphics...

Posted by [David Fanning](#) on Mon, 25 Feb 2002 03:27:42 GMT

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Mark Hadfield (m.hadfield@niwa.co.nz) writes:

>> Just for kicks, I've also tried every combination of RETAIN and

>> RENDERER

>

> You did this for kicks? You are a sick boy.

It **is** odd that everyone I know who has even gotten involved with graphics object programming gets in this programming-by-desperation mode sooner or later. I've come to think of it as the necessary chaos just before the big spiritual break-through. In fact, I've grown so accustomed to it that I pretty much start out like this when I'm learning something new in the object graphics realm. Saves me a lot of time, usually.

Cheers,

David

P.S. Now that I think about it, this is like a zen koan. Just cut through all the intellectual nonsense and head right to the truth! "What is the value of the graphics renderer?" What could be simpler than that?

--

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Subject: Re: Disappearing Object Graphics...

Posted by [Rick Towler](#) on Mon, 25 Feb 2002 17:33:49 GMT

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Ted,

Whithout seeing any code, all I can guess is that maybe your view isn't set up properly. This would explain how when you translate your ROI's around they appear and dissappear as they move into and out of the viewing volume. But this is only a guess.

can you provide a *simplified* example demonstating this behaviour?

-Rick

Subject: Re: Disappearing Object Graphics...
Posted by [Ted Cary](#) on Mon, 25 Feb 2002 18:41:59 GMT
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Rick Towler wrote:

> Ted,
>
> Whithout seeing any code, all I can guess is that maybe your view isn't set
> up properly. This would explain how when you translate your ROI's around
> they appear and dissapear as they move into and out of the viewing volume.
> But this is only a guess.
>
> can you provide a *simplified* example demonstating this behaviour?
>
> -Rick

The ROIs are definitely inside the viewing volume, at least as I understand it--in front of the eye and between the clipping planes (parallel projection). I think the problem has to do with how the renderer deals with more than one ROI on the same plane, even if they don't overlap anywhere.

None of this explains why changing the color of one ROI erases another one. I'll have two ROIs and then issue only two commands--1) a SetProperty to change one ROI's color, 2) a Draw command to the graphics window to render the view. The desired ROI appears in the new color, but the other ROI disappears entirely (although it still shows up in the hierarchy, with no GetProperties changed whatsoever). This is with the software renderer.

Putting every single ROI on a different plane between the clipping planes seems to work, but it's silly and difficult. When I have 20 or more ROIs on the screen in different ROIGroups and I'm erasing them and moving them around, this solution is not easy to implement.

I'll write a simplified example when I find some time.
