Subject: Re: Alpha Blending inside of Widgets / Graphic Objects in Widgets
Posted by Rick Towler on Thu, 30 Jan 2003 17:54:47 GMT
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"Kay Bente" wrote

> normal widget (instead of a Widget_Draw).

Well, yes and no. Widget_Draw is a widget and it seems quite normal to me ;)

I don't really understand what you are trying to do but I'll venture a guess that you would like to place an image in your widget that appears to be part of the widget base? For example, if I select Help->About IDL in IDLDE I get a dialog with the IDL logo in the upper left corner. Upon inspection you'll notice that the logo isn't square (because of the shadow). The only way to do this would be to set the background color of your draw widget to the color of your widget base then draw your image. The image will look as if it is drawn directly in the base.

Finding the color of the widget base is the trick.

AFAIK there is no platform independent way to do this so any solution will be limited. I have done this on Windows machines using the GetSysColor function (delcared in winuser.h, link to user32.lib). It works like a charm and there is no better way to distrat your users from the limitations of your program than by putting up a flashy interface. :)

You better start polishing your C skills as there is no built in function for this in IDL.

You could read the compressed data using IDL. I'm sure the file format is available on the web. With the compressed data in hand, you would need to decompress it. This might not be that difficult. Find a few MP3 players and look at the .dll (or .so) libraries they ship with. Chances are you would be able to use IDL's CALL_EXTERNAL function to access the decompression algorithm (you'll just need to find the entry point). For short clips, you could decompress a section of the file and use IDL's WRITE_WAV to create an uncompressed .wav file. Since IDL doesn't do much more than ring it's bell, the easiest way to play the file would be to use SPAWN to call an appropriate program. Extra credit would be given for using Randall Frank's IDL_Tools .dlm package which includes an interface for playing sound.

Now that sounds like a project.

-Rick

Subject: Re: Alpha Blending inside of Widgets / Graphic Objects in Widgets
Posted by Kay Bente on Fri, 31 Jan 2003 13:45:18 GMT
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Hi,

for the first part of your answer, I think you misunderstood me, i was
thinking about to put an IDLgrImage or IDLgrWindow, or what ever of these

image fusion.

Or as another solution would it be possible, do get the fusioned image as a
truecolor image (256,256,3)-array out of an object.

> You better start polishing your C skills as there is no built in function
> for this in IDL.

idl, to program, the GUI and the rest and IDL is the only language i know.

but thanks for your answer
Kay

Subject: Re: Alpha Blending inside of Widgets / Graphic Objects in Widgets
Posted by David Fanning on Fri, 31 Jan 2003 14:42:22 GMT
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Rick Towler (rtowler@u.washington.edu) writes:

> Extra credit would be given for using
> Randall Frank's IDL_Tools .dlm package which includes an interface for
> playing sound.

Peter Mason has written a little DLL for playing WAV files
on Windows machines that even I managed to get working.
You can learn more about it here:

http://www.dfanning.com/tips/beep.html

The zip file comes with some sound clips. My favorite is
AllWrong.wav, which I tend to play a LOT! :-)

Cheers,

David
--
David W. Fanning, Ph.D.
Fanning Software Consulting, Inc.
Phone: 970-221-0438, E-mail: david@dfanning.com
Coyote's Guide to IDL Programming: http://www.dfanning.com/
Toll-Free IDL Book Orders: 1-888-461-0155

Subject: Re: Alpha Blending inside of Widgets / Graphic Objects in Widgets
Posted by Rick Towler on Fri, 31 Jan 2003 17:09:18 GMT
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"Kay Bente" wrote

> for the first part of your answer, I think you misunderstood me, i was
> thinking about to put an IDLgrImage or IDLgrWindow, or what ever of these

> image fusion.

Ahh, I see. So you want to use alpha blending to display 2 or more images simultaneously. This can be done a number of ways, with or without objects. Don't be afraid of the objects, they're really quite nice once you get to know them.

At the full object end of the spectrum you can create two IDLgrImage objects (with alpha channels) and display them, one on top of the other, in an IDLgrWindow. Modulating image alpha will change the amount of fusion between the two. David Fanning has written a fine program which does just this called image_blend and it is available on his website (www.dfanning.com)

Another option would be to create your two IDLgrImage objects and render to an instance of IDLgrBuffer, then Read the buffer to get your fused image. This wouldn't save you much over the first example.

The completely object free way would be to do it all by hand. The "traditional" alpha blending equation is given in the docs to IDLgrImage and it is something like:

result = ALPHA * srcPixel + (1 - ALPHA) * destPixel

where

ALPHA - ranges from 0.0 to 1.0
result - Is the alpha blended color
srcPixel - Is the foreground pixel
destPixel- Is the background pixel

with an alpha of 0.0 the result will be the background pixel and with an alpha of 1.0 the result will be the foreground pixel.

Use this equation on your R,G,B components of your image to calculate your fused image.

Hope this helps.

-Rick

Subject: Re: Alpha Blending inside of Widgets / Graphic Objects in Widgets
Posted by Karl Schultz on Fri, 31 Jan 2003 17:49:17 GMT
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"Kay Bente" <k.bente@fz-juelich.de> wrote in message news:b1dulh$3naa$1@zam602.zam.kfa-juelich.de...
> Hi,
>
> for the first part of your answer, I think you misunderstood me, i was
> thinking about to put an IDLgrImage or IDLgrWindow, or what ever of these

> image fusion.

If you want to do blending then I think you'll have to use Object Graphics if you want the graphics support to do the blending for you. You can do a lot of work and do the blending yourself with IDL code, but that's might be slow and the amount of work involved depends a lot on what you are doing.

In IDL 5.6, the only objects that can really be blended are Images and Polygons/Surface via a texture map.

You can configure Widget_Draw to use Object Graphics (GRAPHICS_LEVEL=2) and then you can put your objects in that widget window.

> Or as another solution would it be possible, do get the fusioned image as a
> truecolor image (256,256,3)-array out of an object.

You can use IDLgrBuffer to make an "off-screen" rendering buffer. You can draw your objects into the buffer and then extract an RGB image.

If you can tell us more about what you want to draw, we can help more.

Also, there have been quite a few postings on this topic. You might want to use Google to search the newsgroup for words like "transparency", "alpha", "blending", etc.

Karl
