Subject: moving to objects / IDL objects and object graphics
Posted by markb77 on Sat, 06 Oct 2007 20:19:56 GMT
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I'm trying to get a feel for object programming in IDL. I'm reading the last chapter of David Fanning's book on the subject. Here's what I'm wondering:

I like the object graphics system in IDL. I also like the concept of writing my own objects. For example, I currently have a widget program containing a draw window. The draw window is set to object graphics mode. I define an IDLgrView object and in the view I place an IDLgrImage object.

The data that I'm working with isn't an image, however, it's a movie. What if I were to create my own MBgrMovie object? This object could contain all of the relevant information about the movie.. number of frames, dimensions, and many other application specific tags. I could write methods that would act on the movie, etc, etc. The movie could make use of image objects, too.

But could this be integrated with IDL object graphics? For instance, would the IDLgrView know what to do if I were to Add my Movie object to it? And would the IDLgrWindow know how to draw it?

that's my question of the moment. I'm going to keep reading on this object stuff, but I'm wondering about integration with object graphics...

thanks
Mark Bates

Subject: Re: moving to objects / IDL objects and object graphics
Posted by Rick Towler on Tue, 09 Oct 2007 16:09:24 GMT
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markb77 wrote:

I would suggest creating your MBgrMovie object as a subclass of IDLgrImage. Keep it simple. All you really need to add are the properties you have mentioned, a timer as Robbie mentioned, a pointer to the movie data, and some methods to make it all work (stop, start, fwd, rev, go to, etc).

I personally would separate the GUI from the movie object so I would only include one hidden base widget which would handle the timer events.

Your object's timer event will do two things. Update your DATA property with "this" frames image data and optionally call a callback. Create a property that contains the name of the callback that your hidden timer event calls when your movie object needs to draw the next frame (check out call_function and call_procedure). Construct your callback such that you pass your movie object reference as well as a pointer to "this" frames image data. Including the pointer to the image data would allow you to use it in direct graphics applications as well.

> But could this be integrated with IDL object graphics? For instance,
> would the IDLgrView know what to do if I were to Add my Movie object
> to it? And would the IDLgrWindow know how to draw it?

Your object will be a subclass of IDLgrWindow so all you need to do is add it into your object hierarchy. In this case I don't think you need to override the DRAW method as David suggests. Your movie is ruled by the timer. Just get the proper frame into the image object at the right time and let the callback routine know. It will be the application's responsibility to call the draw method for the view.

At some point you may want to consider more elegant methods to handle the image data. Holding the entire movie in RAM may not always be an option.

-Rick
