
Subject: Interactive Graphics Library

Posted by [Raphael Sadoun](#) on Sat, 12 May 2012 09:18:10 GMT

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Dear IDL users,

I have been reading this great newsgroup for quite a while now but never got a a change to post so

Hi to everyone :)

After using the wonderful cg* routines from David's fanning Coyote Library, I have thought that it might be nice to have interactive capabilities in IDL direct graphics (similar to the new FG routines but with the speed of DG). So I have tried to code an object oriented framework to achieve this goal. In order to not reinvent the wheel, I built it upon the already existing (and excellent) Catalyst Library written by D. Fanning and D. Burr ridge.

I have been somewhat successful and I was quite satisfied with the result so I thought I could share it in case other people might find it useful. You can download the full Interactive Graphics Library here :

http://igl.googlecode.com/files/Interactive_Graphics_Library_1.0.zip

To install the code, just extract the folder in a directory on your idl path.

Because it depends on the Coyote, Catalyst and TextToIDL Libraries, I have included these as well in the ZIP file so be careful if you already have a copy of those.

After installation, you can view a list of available routines by typing "iglhelp" at the IDL prompt.

Most Direct Graphics routines have their interactive equivalent and I have added routines to produce a legend and a colorbar. There is also a routine that saves the content of the current window to a disk file.

The code has still probably lots of issues and I am not sure it is totally portable. I have tested it on a UNIX machine as well as moderately on WINDOWS. If you find bugs, you can post them here and I will try to fix them if I can find the time (being a graduate student does not help!).

Cheers

Raphael

Subject: Re: Interactive Graphics Library

Posted by [Russell Ryan](#) on Mon, 21 May 2012 19:26:54 GMT

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On May 21, 7:38 am, Raphael Sadoun <raphael.sad...@gmail.com> wrote:

> On May 12, 3:45 pm, Coyote <sageande...@gmail.com> wrote:

>

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> I have corrected some minor issues which I did not catch before

> releasing the code.

> Also, I received an email pointing out some inconsistency about the

> way the resource directory

> if referred to in the code.

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> Cheers

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> Raphael

Wow, this is super cool, Raphael. I'm looking forward to digging in to this!

R

Subject: Re: Interactive Graphics Library

Posted by [Russell Ryan](#) on Wed, 23 May 2012 01:34:09 GMT

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On May 21, 3:26 pm, Russell Ryan <rr...@stsci.edu> wrote:

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So, I was looking at the code. Can either of you two explain the
virtues of writing a GUI as an object?

Subject: Re: Interactive Graphics Library
Posted by [Raphael Sadoun](#) on Thu, 24 May 2012 15:36:33 GMT
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On May 23, 3:34 am, Russell Ryan <rr...@stsci.edu> wrote:
>
> So, I was looking at the code. Can either of you two explain the

> virtues of writing a GUI as an object?

Well, one of the basic principle of the Interactive Graphics Library is that all the graphics displayed in the window constitute an object tree hierarchy with the window object at the top. So the main advantage for writing the window as an object was to benefit the automatic memory management that the catalyst library provides with the CATATOM class (using reference counting). This is really needed in order to avoid memory leakage when using an object-oriented framework like the IGL which can potentially creates a LOT of objects!

Now, it is also generally easier to write widget applications (GUI) as objects since the state of the application can be stored directly with the object (class arguments) instead of using a pointer to a structure (often referred as the "info" structure).

Cheers

Raphael
