
Subject: Interactive Debugging Tools

Posted by [David Fanning](#) on Thu, 02 Jul 2009 18:54:39 GMT

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Folks,

I've been debugging a program this week that uses a large image cube. I peel one image after the other off the cube because I can't load the whole cube into memory at once.

But that's neither here nor there. The point is, there is a problem with some of the image data and I've been trying to track it down. I have some very nice tools for interactively looking at images and their values at specific locations (I am thinking in particular of `ImgWin`.) The problem is, I can't use `ImgWin` to look at my image data when I am stopped inside my program, because as a widget program, `ImgWin` needs access to the command interpreter at the main IDL level. A dilemma, as they say.

If I could only get my image data back to the IDL main IDL command level where I could look at it. Well, now I can. I wrote a new Coyote Library program this morning, named `SaveToMain`. I can use it to export any IDL variable from within any IDL procedure or function back to the main IDL level:

```
IDL> SaveToMain, thisImage
```

If I call the program as above, the variable is exported to the main level with the same name as it has in the local procedure or function. If I wish to give it a new name, I just do this:

```
IDL> SaveToMain, thisImage, 'problemImage'
```

This allows me to be in my stopped code somewhere. Find a variable I want to look at, export it back to the main level of IDL, type `RETALL` to return to the main IDL level, and use my interactive widget tools to further investigate the variable. I just find this extremely useful. Maybe you will, too.

<http://www.dfanning.com/programs/savetomain.pro>

Cheers,

David

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David Fanning, Ph.D.

Coyote's Guide to IDL Programming (www.dfanning.com)

Sepore ma de ni thui. ("Perhaps thou speakest truth.")
