Subject: Re: IDL 8.4 and ENVI 5.2
Posted by penteado on Thu, 16 Oct 2014 17:06:13 GMT
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I was reading the what's new (http://www.exelisvis.com/docs/WhatsNew.html). There are lots of wonderful new things!. Chris' post doesn't do justice. Some of the new features I have wanted for a very long time: filter, map and reduce for hashes and lists, list sort (with user-selectable comparison function), generatecode,lambda functions, variable attributes.

All of that is much appreciated, Chris.

On Wednesday, October 15, 2014 8:49:56 AM UTC-7, Chris Torrence wrote:
> Hi all,
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>
> IDL 8.4 and ENVI 5.2 have just been released! If you are current on maintenance, you can download the latest release at:
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>
> http://www.exelisvis.com/MyAccount/Downloads.aspx
>
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>
> Just be patient if it's slow, because there are a lot of people downloading...
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> What's new? Here is a brief summary:
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> ALOG2 function
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>
> BigInteger class: Allows you to create and manipulate integer numbers of any size. For example:
>
> b = BigInteger(2)^1279 - 1
>
> PRINT, '2^1279 - 1 is prime?', b.IsPrime() ? 'true' : 'false'

>
> c = b.NextPrime()
>
> PRINT, 'next prime is ', c - b, ' greater'
>
>
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>
> BOOLEAN Variables: Boolean variables are actually variables of type BYTE with a special boolean flag. There are also two new system variables, !TRUE and !FALSE.
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>
> Code Coverage: You can now analyze the code coverage for your applications using the CODE_COVERAGE function. The function returns the line numbers of code that were executed and not executed for your given routine. In addition, the Code Coverage feature has been integrated into the Workbench.
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> Folder Watch: The new FOLDERWATCH object monitors folders for changes and invokes a user-defined callback whenever a change occurs.
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> FFT Power Spectrum: computes the Fourier Power Spectrum of an array, with optional filtering.
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> Generate Code in New Graphics: generates the code needed to reproduce the contents of a graphics window.
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>
> Lambda Functions and Procedures: create simple inline routines that can be used for functional programming. For example:
>

> IDL> compile_opt idl2
>
> IDL> lam = LAMBDA(n:n le 3 || MIN(n mod [2:FIX(SQRT(n))]))
>
> IDL> PRINT, lam(499), lam(4999), lam(49999), lam(499999), lam(4999999)
>
>
>
> --------------------
>
> Variable Attributes: You can now access special attributes on all IDL variables. For example:
>
> var = RANDOMU(seed, 200, 100)
>
> PRINT, var.length
>
> PRINT, var.ndim
>
> PRINT, var.dim
>
> PRINT, var.typecode
>
> PRINT, var.typename
>
>
>
> --------------------
>
> Static Methods for IDL Variables: You can now call special static methods on all IDL variables except objects and structures. For example:
>
> var1 = RANDOMU(seed, 200, 100)
>
> PRINT, var1.Mean()
>
> PRINT, var1.Total()
>
> var2 = var1.Sort()
>
> HELP, var2
>
>
>
> --------------------
>
> Plus a bunch of other feature enhancements and library updates. See the "What's New" in the IDL documentation for the full list:
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> http://www.exelisvis.com/docs/WhatsNew.html
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> As always, IDL is backwards compatible. All of your existing IDL code should continue to work as it did before. SAVE files created in earlier versions of IDL will work fine. In addition, SAVE files created in IDL 8.4 should work fine in IDL 8.3. Finally, we preserved the binary compatibility of IDL 8.4 with 8.3 - so libraries (such as the Slither Python module) should continue to work in 8.4 without needing to be recompiled.
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> Cheers,
>
> Chris
>
> ExelisVIS
