
Subject: IDL 7.0 Preview Review

Posted by [David Fanning](#) on Wed, 14 Nov 2007 05:47:11 GMT

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Editor's Note: I apologize in advance. We had assigned our most reputable technology reporter, David Fanning, to this story, but he has come down with "food poisoning" and has taken to his bed. (At 7:30, no less!) Because we are on a tight publication deadline, we have asked our Entertainment Reporter, El Senor Coyote, to fill in for Mr. Fanning. Unfortunately, Mr. Coyote did not attend the entire presentation. (He says he found the three hour business portion of the meeting intolerable without any breaks.) What follows, then, is what Mr. Coyote has been able to cobble together from Mr. Fanning's hastily written notes and his own, imperfect memory. We apologize if events didn't transpire exactly as reported here.

Boulder, CO 13 Nov 2007 --

Excitement was in the air, and programming testosterone filled the room, as the lucky guests at the IDL 7.0 Preview and User's Group Meeting were ushered along the red carpet and into their seats shortly before 1:00. The question on everyone's mind was: What does the damn thing look like!? They were referring, of course, to the new Eclipse-based IDL development environment, now called the IDL Workbench.

We had to wait nearly 20 minutes to find out, while we listened to a long history of IDL. (It first got its start in the punch card era, I guess.) Luckily, David Stern was in the audience to confirm that "Yes, that's how it happened." But that was then, and this is now, and **finally** we have found the one true course, and we can expect nothing but great things in the future for IDL. (Or something to that effect. I had to take a bathroom break.)

Anyway, the new IDL Workbench sorta looks like the old IDLDE, but not quite, and its WAY cooler than anything else anyone could think of, and it works the same on every platform God ever made, which is a HUGE advantage to the IDL developers, as they only have to maintain one code base now. (Presumably freeing up some time to work on something else, so we will get more for our maintenance dollars, and so forth.)

One of the developers showed us a few of its tricks. (A still secret incantation will allow the user to hook up an RSS feed

of this very newsgroup into the Workbench environment. A feature some people may not see as much of an advance, come to think of it.)

Anyway, LOTS of new features that certainly got the presenters pretty darned excited. Of course, the cynical programmer sitting beside me pointed out that he had been doing everything they were showing up there for *at least* the last five years with EMACS and IDLWAVE mode. So I guess you could think of the IDL Workbench as EMACS-lite, if you like. Anyway, it does some nifty things.

Of course, if you are too old to change (it is a possibility for some of the gray hairs sitting in the audience), those of you working on UNIX platforms can still have access to the normal IDL command line. If you are a Windows user, well, you are used to being told what to do anyway. And, I'm SURE you are going to like it!

Everyone was careful to point out that there was a bit of a learning curve with the new Workbench, but that in a couple of days you would be so overjoyed with the new features that learning would actually be fun again. Ronn Kling has written a little book, entitled "Navigating the IDL Workbench" that I suppose is yours for the asking. The second chapter is ominously entitled "Don't Panic!!!", but it is short enough to read while you eat a burrito, so that's encouraging.

After the IDL Workbench demo we got an update on where IDL is headed in the next 3-4 years. The target audience "doesn't want to read a manual", "wants something that looks like his Java or C++ environment", "wants to focus on the task at hand", and "wants to get away from programming". And--I was thinking--is dumb as a stone, but they didn't say that.

Anyway, expect more features that "modernize how users interact with IDL". This would include more GUI-based tools, drag and drop functionality, and what is going to be called "Interactive Ad-Hoc Analysis", which is, well, different in some way than what we do now. "We want to change the way you interact with IDL!", they said. Hey, I'm all for that. The less thinking I have to do, the better, I say. They did offer some examples of how one might set graphics and other visualization properties from the IDL command line that looked to me a lot like what MatLab allows you to do now.

We did get some exciting news. The IDL GUI-Builder is history! Having that god-awful code languish in infamy is a step forward, I think. :-)

The bad news is, we are going to make another stab at a ToolBuilder sometime in the future. (There is hope we might get something useable on this, the fourth, or is it fifth?, iteration.) Anyway, Eclipse is

set up for this kind of thing, so we are going to have another go. This one will be neat. No event handling, no state structure, no coding. Everything will just work! (I asked how data you might want to do something with would get passed around in this "program", but those details haven't been worked out yet. In conversations later, I learned that people were actually thinking about this and there was talk about having data "show up" in the "right scope" somehow. At least it gave me some ideas for how I could make data "show up in the right scope" even now!)

After the Workshop presentation, we were treated to a demonstration of an IDL program written at LASP, using iTool functionality. Just about the entire thing had been coded up by an undergraduate programmer who "didn't know a darn thing about IDL when he started." The point of the presentation was, apparently, to demonstrate how easy it is to build tools using iTools functionality.

Of course, they couldn't quite work out how to build the iTool they wanted to build (and who here would cast the first stone?), so they opted for putting all their functionality in a single pane of an existing iTool. Still, it worked pretty good. Then we learned that "We use common blocks to pass data. It's probably not ideal, but it was one of the ways we could get around some iTool limitations." Whatever. I doubt a professional programmer could have done much better, and my hat is off to the kid.

Next up, Ronn Kling showed us some of the neat things he has coded up for his web page and in his annual Christmas cards. He is always doing *something* interesting. We didn't get to look at code, of course, and the "how?" was pretty sketchy, but sometimes just knowing something is possible is enough to give you encouragement.

Finally, an ITTVIS technical support engineer gave us a run-down on what's happening on the ITTVIS web page. We learned about some neat new things on the IDL Code Contrib page, including (and I have not downloaded this yet myself) an IDL program for viewing and reading GRIB files. (My cynical programming friend and I both raised our eyebrows, pretty much simultaneously, so that is a VERY good sign.)

I detected a new and refreshing openness on the part of IDL developers at this meeting to interact and engage customers in what they really wanted. There is an openness to working with 3rd party developers and consultants that I have never seen before. I certainly came away feeling that the ITTVIS people are smart, capable,

and ready to listen to user feedback.

Oddly, I don't seem to run into the customer they are apparently writing code for in my day to day IDL dealings, but he or she must be out there. They are sure spending a lot of time and money going in this direction.

I'm going to have a look at the new IDL Workshop. God knows I've tried to learn EMACS for the last 4-5 months and I *still* have to look up how to do a Search-and-Replace every time I want to do it. My fingers just don't want to learn that dance. The IDL Workshop may be just what the doctor ordered. At least I hope so.

The IDL 7.0 CD was signed off on just today. It will be available from the ITTVIS web page sometime near the end of November, and will be shipped to users with valid maintenance contracts about two weeks after it is released on the web page.

Faithfully rendered from Fanning's lousy notes,

Coyote

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

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

Subject: Re: IDL 7.0 Preview Review

Posted by [Michael Galloy](#) on Wed, 14 Nov 2007 17:55:56 GMT

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I'd say the best part was meeting people from the newsgroup in person at the reception. We need to get together more often.

See below for more comments...

On Nov 13, 10:47 pm, David Fanning <n...@dfanning.com> wrote:

- > Anyway, the new IDL Workbench sorta looks like the old IDLDE, but
- > not quite, and its WAY cooler than anything else anyone could
- > think of, and it works the same on every platform God ever made,
- > which is a HUGE advantage to the IDL developers, as they only
- > have to maintain one code base now. (Presumably freeing up some
- > time to work on something else, so we will get more for our
- > maintenance dollars, and so forth.)

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- > secret incantation will allow the user to hook up an RSS feed
- > of this very newsgroup into the Workbench environment. A feature
- > some people may not see as much of an advance, come to think of it.)

I was surprised to learn there was a developer's RSS feed from the ITT VIS website that is displayed there now. Check out:

<http://www.itvis.com/feeds/devnet.xml>

Now how about ones for new code contrib entries, news articles, tech tips, etc.? Trying to figure out if there were any new posts in the beta forum was a pain. How about an RSS feed?

- > Anyway, LOTS of new features that certainly got the presenters
- > pretty darned excited. Of course, the cynical programmer sitting
- > beside me pointed out that he had been doing everything they were
- > showing up there for *at least* the last five years with EMACS and
- > IDLWAVE mode. So I guess you could think of the IDL Workbench
- > as EMACS-lite, if you like. Anyway, it does some nifty things.

And, as an Emacs user, what program couldn't be described as "Emacs-lite"?

- > Of course, if you are too old to change (it is a possibility for
- > some of the gray hairs sitting in the audience), those of you working
- > on UNIX platforms can still have access to the normal IDL command line.
- > If you are a Windows user, well, you are used to being told what to do
- > anyway. And, I'm SURE you are going to like it!

I still don't know why there is no Windows command line. I expect it is because they think there is no demand for it. Windows users should ask for this if they are interested in it.

- > Everyone was careful to point out that there was a bit of a learning
- > curve with the new Workbench, but that in a couple of days you would
- > be so overjoyed with the new features that learning would actually
- > be fun again. Ronn Kling has written a little book, entitled
- > "Navigating the IDL Workbench" that I suppose is yours for the asking.
- > The second chapter is ominously entitled "Don't Panic!!!", but it is
- > short enough to read while you eat a burrito, so that's encouraging.

As you indicate below, Emacs has a steep learning curve as well. I'm fairly confident that the Eclipse learning curve is much easier on new users while still providing approximately the same (or more) functionality.

- > After the IDL Workbench demo we got an update on where IDL is headed
- > in the next 3-4 years. The target audience "doesn't want to read a
- > manual", "wants something that looks like his Java or C++ environment",
- > "wants to focus on the task at hand", and "wants to get away from
- > programming". And--I was thinking--is dumb as a stone, but they didn't
- > say that.

I was a bit worried about that part too. But since I type words on my computer instead of just drag-and-dropping all day, maybe this will insure my position in the ruling elite.

- > Anyway, expect more features that "modernize how users interact
- > with IDL". This would include more GUI-based tools, drag and drop
- > functionality, and what is going to be called "Interactive Ad-Hoc
- > Analysis", which is, well, different in some way than what we do
- > now. "We want to change the way you interact with IDL!", they said.
- > Hey, I'm all for that. The less thinking I have to do, the better,
- > I say. They did offer some examples of how one might set graphics
- > and other visualization properties from the IDL command line that
- > looked to me a lot like what MatLab allows you to do now.
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- > We did get some exciting news. The IDL GUI-Builder is history!
- > Having that god-awful code languish in infamy is a step forward,
- > I think. :-)

I almost stood up and clapped.

- > The bad news is, we are going to make another stab at a ToolBuilder
- > sometime in the future. (There is hope we might get something useable
- > on this, the fourth, or is it fifth?, iteration.) Anyway, Eclipse is
- > set up for this kind of thing, so we are going to have another go.
- > This one will be neat. No event handling, no state structure, no
- > coding. Everything will just work! (I asked how data you might want
- > to do something with would get passed around in this "program", but
- > those details haven't been worked out yet. In conversations later,
- > I learned that people were actually thinking about this and there
- > was talk about having data "show up" in the "right scope" somehow.
- > At least it gave me some ideas for how I could make data "show up
- > in the right scope" even now!)

I suppose we'll just have to wait and see. The only "tool builder" type application I've ever liked was the QT Designer and I still hand code instead of using it. I'm probably not who they are building it for, though. But at least have it build code that I can fix.

- > After the Workshop presentation, we were treated to a demonstration
- > of an IDL program written at LASP, using iTool functionality. Just
- > about the entire thing had been coded up by an undergraduate programmer

- > who "didn't know a darn thing about IDL when he started." The point of
- > the presentation was, apparently, to demonstrate how easy it is to
- > build tools using iTools functionality.

Or, once you spend some time figuring it out, how easy it is to build tools using iTools functionality.

- > Of course, they couldn't quite work out how to build the iTool they
- > wanted to build (and who here would cast the first stone?), so they
- > opted for putting all their functionality in a single pane of an
- > existing iTool. Still, it worked pretty good. Then we learned that
- > "We use common blocks to pass data. It's probably not ideal, but it was
- > one of the ways we could get around some iTool limitations." Whatever.
- > I doubt a professional programmer could have done much better,
- > and my hat is off to the kid.

Yes, it looked pretty useful.

- > Next up, Ronn Kling showed us some of the neat things he has
- > coded up for his web page and in his annual Christmas cards.
- > He is always doing *something* interesting. We didn't get to
- > look at code, of course, and the "how?" was pretty sketchy,
- > but sometimes just knowing something is possible is enough
- > to give you encouragement.

Ronn definitely showed some cool demos. I've used his trick of creating another view to show the magnifying glass view of an image over the top of the full size view of the image, but I was surprised to hear him say they did it because "device, /copy was unacceptably slow" for their application.

- > Finally, an ITTVIS technical support engineer gave us a
- > run-down on what's happening on the ITTVIS web page. We
- > learned about some neat new things on the IDL Code
- > Contrib page, including (and I have not downloaded this
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- > files. (My cynical programming friend and I both raised
- > our eyebrows, pretty much simultaneously, so that is a
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I did too and it was encouraging.

- > Oddly, I don't seem to run into the customer they are
- > apparently writing code for in my day to day IDL dealings,
- > but he or she must be out there. They are sure spending a lot
- > of time and money going in this direction.

These might not be *current* customers.

- > I'm going to have a look at the new IDL Workshop. God knows
- > I've tried to learn EMACS for the last 4-5 months and I *still*
- > have to look up how to do a Search-and-Replace every time I
- > want to do it. My fingers just don't want to learn that dance.
- > The IDL Workshop may be just what the doctor ordered. At least
- > I hope so.

Like I said before, I think the learning curve on the Workbench will be easier on new users. I think debugging is more intuitive and powerful on the Workbench as well. IDL-Wave probably has more features as well as leveraging all the native Emacs features.

- > The IDL 7.0 CD was signed off on just today. It will be available
- > from the ITTVIS web page sometime near the end of November, and
- > will be shipped to users with valid maintenance contracts about
- > two weeks after it is released on the web page.

I can't wait. I really like the new features and use the Workbench regularly for real work, but I need some bugs fixed from the beta...

Mike

--

www.michaelgalloy.com

Tech-X Corporation

Software Developer II

Subject: Re: IDL 7.0 Preview Review

Posted by [Kenneth P. Bowman](#) on Wed, 14 Nov 2007 20:05:36 GMT

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In article <MPG.21a43965961725ad98a0e4@news.frii.com>,
David Fanning <news@dfanning.com> wrote:

This sounds good ...

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- > IDL developers at this meeting to interact and engage
- > customers in what they really wanted. There is an openness

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- > manual", "wants something that looks like his Java or C++ environment",
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- > programming". And--I was thinking--is dumb as a stone, but they didn't
- > say that.

They saw no irony in IDL programmers wanting to get away from programming?

Ken Bowman

Subject: Re: IDL 7.0 Preview Review

Posted by [David Fanning](#) on Wed, 14 Nov 2007 23:45:20 GMT

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Kenneth P. Bowman writes:

- > This sounds good ...
- >
- >> I detected a new and refreshing openness on the part of
- >> IDL developers at this meeting to interact and engage
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- >> say that.
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- > They saw no irony in IDL programmers wanting to get away from programming?

Well, I have been thinking about this today. Mike is absolutely right, ITTVIS is not thinking of current license holders (and

they claim they have 150K "seats" of IDL out there and another 25K "seats" of ENVI). They are thinking about who they might be able to sell IDL to in the future.

They coo and cluck and make you feel good, of course, since they still need your maintenance dollars, but their eyes are focused somewhere over your left shoulder, looking out into the middle distance for the lower fifty percent of your IDL class who could no more write an IDL program than they could live without their iPhone. Those people still have to do science, God help us. (Does it surprise you in the same ironic way that half the Republicans running for President in the US don't believe in evolution?)

So maybe ITTVIS *is* being smart about this. Why worry about dinosaurs like us? Heck, I'm going to be happy if I can just keep from deleting all the files off my disk when I fire up that monster application! And, anyway, I'm thinking its time to look for a small village in South America where I can practice my Spanish and go fishing. There's irony for you, an IDL programmer who is thinking of getting away from programming. :-)

Cheers,

David

P.S. Let's just say, I've read Ronn's book cover to cover more than once, getting ready for this big boy.

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

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

Subject: Re: IDL 7.0 Preview Review

Posted by [rlkling](#) on Thu, 15 Nov 2007 05:37:01 GMT

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I agree that ITTVIS is definitely looking for future users that don't fit into today's demographics. But that isn't necessarily bad. Look at the bridge object that came out in 6.3. I am pretty sure that ITTVIS needed to create this so that Eclipse could call IDL, but I have been using it very effectively in the analysis I do. At the Users Group they said that they are striving for an outstanding "out of the box" experience for new users to IDL in future versions. Just think of all

the problems they will have to solve to make this possible. Having the data show up in the right scope is just one example. Certainly we will be able to take advantage of their advances don't you think?

I am also hugely excited about their willingness to work with third party providers. I have been telling ITTTVIS for years that they have the most intelligent users in the world and with just a little encouragement these people would expand IDL's capabilities for free. I believe that this has finally sunk in.

It was really great seeing everyone at the Users Group. I agree with Mike that we need to get ITTTVIS to sponsor these things more often. It was absolutely worth the trip to Boulder from DC.

-Ronn Kling

KRS, inc.

email: ronn@rlkling.com

Use these books to upgrade your IDL skills.

"Application Development with IDL"

"Calling C from IDL, Using DLM's to extend your IDL code". SECOND EDITION includes C++ and debugging! THIRD EDITION includes writing IDL object methods in C and C++!

"Power Graphics with IDL, A Beginner's Guide to Object Graphics"

"IDL primer" A concise introduction to IDL

"Navigating the IDL workbench" Working with the new IDL 7.0

<http://www.kilvarock.com>

Subject: Re: IDL 7.0 Preview Review

Posted by [Haje Korth](#) on Thu, 15 Nov 2007 13:13:33 GMT

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Ronn,
have you figured out Visual Studio debugging with IDL 7.0? This is the only fundamental problem I am worried about.

Haje

<rlkling@gmail.com> wrote in message

news:7bcaa757-f551-4f24-9fc3-e89b115747f4@w34g2000hsg.google groups.com...

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> email: ronn@rkling.com
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Subject: Re: IDL 7.0 Preview Review

Posted by [Kenneth P. Bowman](#) on Thu, 15 Nov 2007 15:13:08 GMT

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In article <MPG.21a5367149f8346298a0eb@news.frii.com>,
David Fanning <news@dfanning.com> wrote:

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> right, ITTVIS is not thinking of current license holders (and
> they claim they have 150K "seats" of IDL out there and another
> 25K "seats" of ENVI). They are thinking about who they might be
> able to sell IDL to in the future.

I guess this means that we will never get a Postscript device that
full supports 24-bit color. ;-(

- > And, anyway, I'm thinking its time
- > to look for a small village in South America where I can
- > practice my Spanish and go fishing. There's irony for you,
- > an IDL programmer who is thinking of getting away from
- > programming. :-)

Just wait until you get that new Mac. It will make IDL programming FUN again and you can always do your programming on that South American beach!

Ken

Subject: Re: IDL 7.0 Preview Review

Posted by [David Fanning](#) on Thu, 15 Nov 2007 15:39:18 GMT

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Coyote wrote:

- > The bad news is, we are going to make another stab at a ToolBuilder
- > sometime in the future. (There is hope we might get something useable
- > on this, the fourth, or is it fifth?, iteration.)

Correction: Someone bumped Mr. Coyote's hand as he was writing this review and he dropped his chocolate covered strawberry on the copy he submitted to the paper. The number he wrote was actually a three. It just looked like a five. Our apologies for any trouble this caused.

Cheers,

The Management

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

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Subject: Re: IDL 7.0 Preview Review

Posted by [rlkling](#) on Fri, 16 Nov 2007 12:53:41 GMT

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Hi Haje,

Yes, it is a little different than before but not too bad.

Under the Debug property (I am using VS 2005) we no longer have the idlde.exe, those entries are all blank. Instead the process is.

1. Bring up VS.
2. Bring up IDL7.0 just like you would if you were running an IDL program.
3. Go back to VS and go to Debug->Attach to Process. A window will popup and choose idl_opserver.exe and either double-click it or select and press the Attach button.
4. From here on it behaves exactly as before.

There may be some way to make this a little more direct but I haven't spent much time working on it. But it does seem that VS ought to have a way to launch the eclipse process and then automatically attach to the idl_opserver.exe that gets created. If anyone figures that out let me know and I will do the same.

-Ronn Kling

KRS, inc.

email: r...@rlkling.com

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<http://www.kilvarock.com>

On Nov 15, 8:13 am, "Haje Korth" <haje.ko...@nospam.jhuapl.edu> wrote:

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- > fundamental problem I am worried about.
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- > Haje
- >

> <rlkl...@gmail.com> wrote in message
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Subject: Re: IDL 7.0 Preview Review
Posted by [Haje Korth](#) on Fri, 16 Nov 2007 16:03:10 GMT

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news:7fabdcc6-4403-4482-89f0-ed50b7d47dc0@c30g2000hsa.google groups.com...

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Subject: Re: IDL 7.0 Preview Review
Posted by [Haje Korth](#) on Fri, 16 Nov 2007 17:45:58 GMT
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ok, i was being a little overconfident. There is no launch+attach, it is either or. so i decided to set the Command in Configuration Setting-> Debugging to idl_opserver.exe and set the Attach option to Yes. Now I do have to launch IDL manually, but this is less effort than manually attaching the process each time. The debug process is then stopped by Shift+F5 rather than exiting the idlde.

Anyway, the tip with the process attachment was great. This was the last remaining issue I had with switching to 7.0. Well, besides the remaining bugs from the Tech Preview, which will now be all fixedd....(yeah right)... I heard 7.1 is planned for spring 08. But with a public roll out of 7.0 we will have some more beta testers. :-)

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haje

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news:fhkev\$bt1\$1@aplnetnews.jhuapl.edu...

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Subject: Re: IDL 7.0 Preview Review
Posted by [David Fanning](#) on Fri, 16 Nov 2007 18:04:42 GMT
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Haje Korth writes:

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> I heard 7.1 is planned for spring 08. But with a public roll out of 7.0 we
> will have some more beta testers. :-)

Gosh, I was worried I might have been leaning toward
the cynical side the other day. :-)

Cheers,

David

--

David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: <http://www.dfanning.com/>
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: IDL 7.0 Preview Review
Posted by [JD Smith](#) on Fri, 16 Nov 2007 22:42:53 GMT
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>> I'm going to have a look at the new IDL Workshop. God knows
>> I've tried to learn EMACS for the last 4-5 months and I *still*
>> have to look up how to do a Search-and-Replace every time I
>> want to do it. My fingers just don't want to learn that dance.
>> The IDL Workshop may be just what the doctor ordered. At least
>> I hope so.
>
> Like I said before, I think the learning curve on the Workbench will
> be easier on new users. I think debugging is more intuitive and
> powerful on the Workbench as well. IDL-Wave probably has more features
> as well as leveraging all the native Emacs features.

As no doubt the Workbench/IDLWAVE comparisons will soon flood the airwaves, everyone should keep in mind a fundamental difference between the two. One is hooked into IDL at a low level, the other interacts with IDL only as a "user". For instance, to query IDL for the current breakpoints, the Workbench no doubt calls some double-secret function hidden well out of reach above the interpreter stack. IDLWAVE says "IDL> help,/BREAKPOINTS", and dutifully sets about parsing the often mangled results, mindful of the changes in syntax which have slowly percolated through the years. That said, it's still pretty usable for me!

JD

P.S. Look for IDLWAVE 6.2 soon.

Subject: Re: IDL 7.0 Preview Review
Posted by [Haje Korth](#) on Mon, 19 Nov 2007 13:32:55 GMT
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David,
don't get me wrong. I think 7.0 is a great improvement over the previous version. However, it is also a big update and the last tech preview did not quite cut it. There was an awful lot to test and I know only skimmed the surface of the new DE functionality. IMHO, It will take a few iteration to iron out the remaining minor bugs. I am curious to see the final product.

Haje

"David Fanning" <news@dfanning.com> wrote in message
news:MPG.21a789a116fb9bb198a0ef@news.frii.com...

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