Subject: IDL 5.0 observations
Posted by Phil Williams on Tue, 27 May 1997 07:00:00 GMT

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I am initially very impressed with IDL 5.0. I'm still running a preview
release on my Mac (got the UNIX versions last week). Spent the weekend
playing with it and beginning to port my XDISPLAY to objects. What a
speed increase in simple stuff like window and leveling. Here are some
of my complaints/observations (I'm sure some of you have the same ones)

1) Still need better manuals. (There are still places where the ;
comments from code didn't get removed).
2) Better online help (at least on the Mac).
3) There still has to be consistancy in keyword usage. i.e. IDLgrWindow
has keyword COLORMODEL, but WIDGET_DRAW has COLOR_MODEL! Why?
4) I love the fact that I can do a = (b = intarr(10)) now.
5) help,output=helpSTR is much better than using a seperate function.
6) Pointers are much better than the handles they replace (same
observations made by others here previously).

That's all I can think of for the moment...

Stay tuned for an objectified version of XDISPLAY soon (I hope!)

Phil

Subject: Re: IDL 5.0 observations
Posted by davidf on Fri, 30 May 1997 07:00:00 GMT

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David Foster writes:

> Yet more IDL 5.0 observations:

> 2. What leads to even more editing is the fact that you should not
>   use EVENT_PRO or EVENT_FUNC keywords in the WIDGET_BASE() call,
>   use EVENT_HANDLER in XMANAGER instead. This means that for all
>   popup utility windows that generate events for their applications,
>   and for each application in turn, you have to modify the widget
>   creation code. Again, a pain if you have many applications.

Actually, I don't think this has changed. The event handler for
the top-level base should *always* be assigned with the XMANAGER
call and *never* with EVENT_PRO. This was true in IDL 4.0, as I
learned only too well after a couple of *very* long evenings
debugging code. I think it is just better documented in IDL 5.0. :-)

> Now that all the crud is taken care of I'm hoping to play around
> with the new features like pointers and OOP stuff. I have a feeling
> I'll be impressed.

I have to say, pointers are blowing me away. They are SOoooo
nice! The only thing I miss about handles (it is a small thing)
is that I could free up the whole lot of them by freeing
the parent. And I am also greatly impressed with how little
effort is required to switch between handles and pointers,
at least in my code. This is a nice job, RSI!

I'm having a few problems with resizeable graphics windows
getting "stuck" at a particular size in certain circumstances,
but so far it's not too bad and I've managed to find work-
arounds.

Cheers,

David

David

David Fanning, Ph.D.
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Phone: 970-221-0438 E-Mail: davidf@dfanning.com
Coyote's Guide to IDL Programming: http://www.dfanning.com

Subject: Re: IDL 5.0 observations
Posted by Mirko Vukovic on Mon, 02 Jun 1997 07:00:00 GMT
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David Foster wrote:
>
> Yet more IDL 5.0 observations:
>
stuff on widgets deleted, but here is my comment:

" guess I have been more than lucky for not using widgets yet"

> 5. Insight is slow and non-intuitive.

I agree with slow, and somewhat with non-intuitive. Makes me wish I had
the 500MHz DEC Alpha PC, because it does make browsing data much easier.

>

> Now that all the crud is taken care of I'm hoping to play around
> with the new features like pointers and OOP stuff. I have a feeling
> I'll be impressed.
>
> Dave
> --

Mirko Vukovic, Ph.D   3075 Hansen Way M/S K-109
Varian Associates Palo Alto, CA, 94304
415/424-4969 mirko.vukovic@varian.grc.com

Subject: Re: IDL 5.0 observations
Posted by Mirko Vukovic on Tue, 03 Jun 1997 07:00:00 GMT
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P. Smith wrote:
stuff deleted
> By the way, I've seen info for getting colours tables set up if running in
> 24 bit mode. I haven't been able to do it for the 16 bit mode (65536
> colours) I run my display in Win95. Everthing plots in red, which is ok
> for line plots but I also need to produce colour contour plots.
>
> Paul

Paul,

You need to do a device,decomposed=0 so that the display functions in
an 8-bit
mode (got that from tech support)

good luck
--
Mirko Vukovic, Ph.D   3075 Hansen Way M/S K-109
Varian Associates Palo Alto, CA, 94304
415/424-4969 mirko.vukovic@varian.grc.com

Subject: Re: IDL 5.0 observations
Posted by davidf on Tue, 03 Jun 1997 07:00:00 GMT
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I wrote earlier today in response to a 16-bit color
question:

> For example, to draw a plot in yellow, you might type

> this in 16-bit environment:
>
>   PLOT, data, Color=GetColor("yellow", /True)
>
> (I just tried this in IDL 5 running on WindowsNT 4.0
> and it didn't work! I got the plot in white, instead.
> I tried it in IDL 4.0.1 and it worked exactly as I
> expected it to work. I'm finding quite a few bugs in
> IDL 5, so I don't know what to make of this. I'll have
> to do more experimenting.)

This "bug" turns out to be operator error. I forgot
to restart IDL after setting my display to 16-bit
color mode. So, yes, 16-bit color is similar to
24-bit color.

You can also draw a plot in yellow using hexadecimal
notation for the color, like this:

  Plot, data, Color='00FFFF'x

Cheers,

David

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Subject: Re: IDL 5.0 observations
Posted by Paul R Smith on Tue, 03 Jun 1997 07:00:00 GMT
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Just a few minor comments...

I find the toolbar buttons to compile, run and go a bit strange. Compile
is ok, but the first few times I tried pressing run it started to spout
errors in code I knew was working ok, specifically "Program code area
full..." and the like. Then I read that run only works if your program has
a procedure in it with the same name as the PRO filename. Pity cos I often
restore a lot of data that I don't like to either pass to procedures or
keep reloading in a procedure. So when I press the go button a blue arrow
jumps to the first line and stops. I find I have to hit go twice before my
main procedure actually goes. This is a step back from doing Ctrl-r in

v4.0.1 which saved/compiled and executed in one hit.

Also the break button doesn't work. I was told it worked ok in the beta, would break out of any currently running program but not now. If thats the case what's it for? Breaking out of widgets? (IQ tester?)

The new cut and paste keys (under Win95) annoy me, I've deleted some big chunks of code by accident when I forgot and used the Ctrl-Ins, Shift-Del combos which are fairly standard across win apps.

I liked the idea behind Insight but find it too clunky and slow to use.

By the way, I've seen info for getting colours tables set up if running in 24 bit mode. I haven't been able to do it for the 16 bit mode (65536 colours) I run my display in Win95. Everthing plots in red, which is ok for line plots but I also need to produce colour contour plots.

Paul

P. Smith writes:

> By the way, I've seen info for getting colours tables set up if running in
> 24 bit mode. I haven't been able to do it for the 16 bit mode (65536
> colours) I run my display in Win95. Everthing plots in red, which is ok
> for line plots but I also need to produce colour contour plots.

Plotting in 16-bit mode is similar to plotting in 24-bit
mode, except that instead of using 8-bits of a 24-bit
value for each color, in 16-bit mode fewer bits are
used. (I think it is 6 bits of red and 5 of blue and
green, but I can't remember exactly. 64x32x32 = 65536.)

I have a couple of articles on my web page that talk
about 24-bit color, but the same principles apply to
16-bit color. There are also a number of programs to
help you work in this color environment. For example,
to draw a plot in yellow, you might type this in a
16-bit environment:

    PLOT, data, Color=GetColor("yellow", /True)

(I just tried this in IDL 5 running on WindowsNT 4.0
and it didn't work! I got the plot in white, instead.

I tried it in IDL 4.0.1 and it worked exactly as I
expected it to work. I'm finding quite a few bugs in
IDL 5, so I don't know what to make of this. I'll have
to do more experimenting.)

Cheers,

David

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Subject: Re: IDL 5.0 observations
Posted by Gilles Ratel on Wed, 04 Jun 1997 07:00:00 GMT
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Mirko Vukovic <mirko.vukovic@grc.varian.com> wrote in article
<3392EC0E.2BAA@grc.varian.com>...
> David Foster wrote:
>>
>> Yet more IDL 5.0 observations:
>>
> stuff on widgets deleted, but here is my comment:
>
> " guess I have been more than lucky for not using widgets yet"
>
>> 5. Insight is slow and non-intuitive.
>
> I agree with slow, and somewhat with non-intuitive. Makes me wish I had
> the 500MHz DEC Alpha PC, because it does make browsing data much easier.

Here, I use eXcursion (PC-100 MHz and Digital AlphaServer 4100 5/466) and
sincerely Insight is slow.
If I use a button of menubar (... popup menu overlap graphic space...)
Insight "refresh" the graphic
space slowly (many second).

Gilles Ratel
ratel@ccfm.ireq.ca

Subject: Re: IDL 5.0 observations

Posted by davidf on Thu, 05 Jun 1997 07:00:00 GMT

Folks,

Just a note about IDL 5.0. It has been brought to my attention
that the actions of GET_KBRD() has been changed in IDL 5.0.
In IDL 4.0.1 you could type this code:

    ok = Get_KBRD(1)

And a Carriage Return character was a valid character to be
read from the keyboard. People have used this code in programs,
for example, to implement a "Hit any key to continue" type of
action.

In IDL 5.0 a Carriage Return is no longer a valid character
for this command, along with other editing keys such as
backspace and delete. Users will now have to hit a valid
alphanumeric key to continue.

Cheers,

David
--
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IDL 5 Reports: http://www.dfanning.com/documents/anomaly5.html

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Subject: Re: IDL 5.0 observations
Posted by Stein Vidar Hagfors H on Thu, 05 Jun 1997 07:00:00 GMT

Another change to the widget handling that I've found
is that calling XMANAGER without any arguments will no
longer resume event processing when called from "within"
another XMANAGER call.

Some times, I like to be able to have widget "A"'s event
procedure "A_EVENT" read in data, start off widget B
from within A_EVENT to display the data, *without* making
A modal (so you can read and display other data sets from A),
but still let the call to B *not* "fall through" - i.e., to
delay the return from B until B actually dies and no longer

needs the data passed to it.

This is handy for those situations where B uses a NO_COPY
operation that would make it's arguments undefined upon
an immediate return.

I'm aware that making B "hang" without modalizing A will
allow A to be killed before killing B (when the return from
B to A_EVENT comes, A may not be valid), but that's quite
OK: The point is that the arguments passed to B may have to
be returned to the user who started A from the prompt, so
A_EVENT needs to get it's hands on the arguments to B *after*
B dies.

In v 4.0.1 one could do this by using something like

    XMANAGER,"B",BASE
    WHILE WIDGET_INFO(BASE,/VALID_ID) DO XMANAGER

in program B, but this now causes an infinite loop calling
XMANAGER without causing events to be processed (but taking
100% cpu power).

This may not be a big problem, but it's at least a significant
change in the way XMANAGER behaves.

Stein Vidar

Subject: Re: IDL 5.0 observations
Posted by thompson on Fri, 06 Jun 1997 07:00:00 GMT
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davidf@dfanning.com (David Fanning) writes:

> Folks,

> Just a note about IDL 5.0. It has been brought to my attention
> that the actions of GET_KBRD() has been changed in IDL 5.0.
> In IDL 4.0.1 you could type this code:

>   ok = Get_KBRD(1)

> And a Carriage Return character was a valid character to be
> read from the keyboard. People have used this code in programs,
> for example, to implement a "Hit any key to continue" type of
> action.

> In IDL 5.0 a Carriage Return is no longer a valid character
> for this command, along with other editing keys such as
> backspace and delete. Users will now have to hit a valid
> alphanumeric key to continue.

Isn't backwards compatibility wonderful?

Bill Thompson

Subject: Re: IDL 5.0 observations
Posted by davidf on Sun, 08 Jun 1997 07:00:00 GMT
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Folks,

I notice that when I put axes on a surface plot that the
X axis title appears to almost touch the numbers that
label the axis. The Y and Z axis titles are much
further away from their respective numbers. You
can see this if you look at the surface plot
in the XSURFACE program at:

  http://www.dfanning.com/documents/programs.html

Does anyone else notice this, or is this a windows
problem. I'm running WindowsNT 4.0.

BTW, this appears to not be an optical illusion
or an accident of perspective, because it holds
true under any rotation.

Cheers,

David
--
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IDL 5 Reports: http://www.dfanning.com/documents/anomaly5.html

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Subject: RE: IDL 5.0 Observations
Posted by davidf on Mon, 09 Jun 1997 07:00:00 GMT
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Folks,

I just got this report from Lena Marshak via e-mail
and confirmed that the behavior is as she describes it
on my WindowsNT machine, too.

David
 -- ----------

Name: Jelena Marshak
E-mail Address: lena@fram.gsfc.nasa.gov
IDL version: IDL Version 5.0 (sunos sparc)
Platform and OS: Ultra1 Creator w/ Solaris 2.5 (CDE 1.0)

Description of Problem: --

I am trying to polyfill a rectangle on a cylindrical map projection.
The rectangle runs along a line of latitude, and so should be a straight
line. (Which it is in IDL 4.0.) Instead, this line looks like a inverted
"V".

Example Code: --

Map_Set, /Grid, /Continent
TVLCT, 255, 255, 0, 35
lon=[-81.2500,83.7500,83.7500,-81.2500]
lat=[28.7500,28.7500,31.2500,31.2500]
Polyfill, lon, lat, Color=35, /Data

Known Workarounds or Fixes: ---

None known.

RSI Technical Support Response: ---------------------------------------

Pending.

Subject: Re: IDL 5.0 Observations
Posted by Andy Loughe on Mon, 09 Jun 1997 07:00:00 GMT
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> Example Code: --
>
> Map_Set, /Grid, /Continent
> TVLCT, 255, 255, 0, 35
> lon=[-81.2500,83.7500,   83.7500,-81.2500]
> lat=[28.7500,28.7500,   31.2500,31.2500]

> Polyfill, lon, lat, Color=35, /Data
>
> Known Workarounds or Fixes: ---
>
> None known.
>
> RSI Technical Support Response: ---------------------------------------
>
> Pending.

Hi Lena, this is your old officemate, Andy!
A known workaround would be to include the Greenwich Meridian when
specifying the coordinates of a polygon which crosses longitude=0.
Your example becomes...

Map_Set, /Grid, /Continent
lon=[-81.25, 0.00, 83.75,   83.75, 0.00, -81.25]
lat=[28.75, 28.75, 28.75,   31.25, 31.25, 31.25]
Polyfill, lon, lat, Color=35, /Data

This should work for IDL 4 and 5. A similar workaround is needed
when crossing the dateline and using polyfill in version 5.
Thanks for pointing this out! Let's hope it gets fixed.

--
Andrew F. Loughe |
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University of Colorado, CIRES Box 449 |
http://cdc.noaa.gov/~afl
Boulder, CO 80309-0449 | phn:(303)492-0707
fax:(303)497-7013
 -- --------------
"I do not feel obliged to believe that the same God who has endowed us
with
sense, reason, and intellect has intended us to forego their use."
-Galileo