Subject: Linux Question
Posted by David Fanning on Wed, 16 Feb 2005 17:54:48 GMT
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Ok, you Linux guys,

I have to break down and install Linux so I can sort out some
X Windows problems with my IDL widgets. Which flavor is the easiest
to install for the, uh, less technically astute members of
our esteemed organization? :-)

Cheers,

David

P.S. I'll probably put it on an old DELL laptop I have
around here and have been using as a doorstop.

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/

Subject: Re: Linux Question
Posted by Robert Barnett on Wed, 16 Feb 2005 23:43:12 GMT
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Indeed there is often some additional work required for getting colors
to work on some older Solaris workstations. In my experience, RSI ships
the 'X' device with rather conservative settings and you have to specify
your own settings in idl.startup. However, I've never had this
particular problem with Linux so far.

If it is simply a color device problem then I think that the best
solution would be to simply make a "color wizard" for *NIX workstations.
This could be something that might assist a first-time user of IDL in
setting up their idl.startup (if it needs to be changed at all). The
same tool might prove a much more reliable debugging method,
particularily if it has lots of online help. I know that such a tool
might have saved a few hours work when I first started to dabble with
IDL on Solaris in 2003.

Then again, such a tool might perpetuate the ignorance that seems to
haunt some members of the before mentioned esteemed organization. And
such a tool is not likey to reach it's intended audience if it does not
ship with IDL.

Robbie

--

nrb@
Robbie Barnett
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Subject: Re: Linux Question
Posted by David Fanning on Thu, 17 Feb 2005 00:13:09 GMT
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Paul Van Delst writes:

> Maybe it's because writing code/getting results is *too* easy nowadays? (Thanks, IDL.
> Sheesh. :o) And maybe the ease of writing code that produces copious amounts of data
> contributes to the generation of errors too subtle to stand out?

You may be on to something here. I usually start a
class by asking what people want to learn to do,
and why they've chosen IDL to do it. Inevitably,
they want to do the most god-awful complicated
things. I always start to sweat because I know how
(some of the time) to do about half of it.

Then we get started, and three hours later when
I find myself saying, "No, *DEVICE* decomposed.
D-E-V-I-C-E. You are typing DEVIOUS," that I
realize I'll be fine, that we aren't going very
far that day or any other. It's only later that
night, after the third or forth margarita that
I get very, very depressed.

Cheers,

David
--
David Fanning, Ph.D.

Subject: Re: Linux Question
Posted by Mark Hadfield on Thu, 17 Feb 2005 00:30:24 GMT
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David Fanning wrote:
> ... It's only later that
> night, after the third or forth margarita that
> I get very, very depressed.

There was a marvellous anti-alcohol (well anti-alcohol-abuse) ad in NZ a few years ago. A guy is holding forth at a pub (US translation bar) to a friend about his problems: unsuccessful at work, wife hates him, disqualified from driving. He goes on about this while knocking back several glasses of beer. "If it was just one problem I could deal with it, but I have so many problems all at once." Meanwhile his friend tries several times to interrupt him, obviously meaning to suggest he shouldn't drink so much, but gives up. Ad ends in depressed silence.

For some reason your post reminded me of that ad, David. I have no idea why :-)

--
Mark Hadfield "Ka puwaha te tai nei, Hoea tatou"
m.hadfield@niwa.co.nz
National Institute for Water and Atmospheric Research (NIWA)

Subject: Re: Linux Question
Posted by David Fanning on Thu, 17 Feb 2005 00:51:42 GMT
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Mark Hadfield writes:

> For some reason your post reminded me of that ad, David. I have no idea
> why :-)

Yep. I don't have any idea, either. :-)

Cheers,

David

P.S. I don't *think* my wife hates me, but she did
tell me she thought I was better off in Munich if
I kept insisted on practicing my German. :-)

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/

Subject: Re: Linux Question
Posted by David Fanning on Thu, 17 Feb 2005 04:18:09 GMT
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Marshall Perrin writes:

> I'll go crawl back in my hole with the other end-users for a while
> now and be quiet again. :-)

No, no. I agree with you *completely*. It is nonsense
in this day and age for IDL to work so poorly out of
the box. And it is ruinous for people who want to promote
and sell IDL. Part of my frustration with iTools is that
I see such a lot of effort on stuff that's not needed,
and so little attention paid to the simple things that
could make a world of difference to the people who are
actually trying to use IDL.

But why are you responding to me! There should be
a ground swell of letters directed to RSI. Why are
so many people willing to settle for this?

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/

Subject: Re: Linux Question
Posted by Michael Wallace on Thu, 17 Feb 2005 04:22:01 GMT
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> I feel that someone needs to stand up here and offer a valiant defense

> of the astrophysics community, but I fear it's too late and we've
> all already been irrevocably branded as hopeless luddites. :-)

> but I hope you don't fault me for wanting to get the most
> science done in IDL as possible with the minimum amount of screwing
> around with configuration parameters or learning language esoterica!
> (Same reason why I, and nearly every other astronomer I know, have
> switched to Macs as much as possible: minimal need to screw around for
> hours just to get things working!)

I work in the space sciences community, so I know exactly what you're talking about. A number of my scientists use Macs for the reason you mention. It seems the younger scientists (ones young enough to have grown up with computers around) are much easier to teach and much more accepting of instruction. They actually want to know a little of how to do their own IDL magic. Many of our young scientists use IDL and know some things better than I do, not that I have any great expansive IDL knowledge. The older scientists (ones who were already through a lot before the personal computer became the norm) fall in the "hopeless luddites" category. It'd take a miracle for them to upgrade from FORTRAN 77 to FORTRAN 90. At least since they're so senior they don't bug me too much -- they have their postdocs bug me. :-)

-Mike

Subject: Re: Linux Question
Posted by Michael Wallace on Thu, 17 Feb 2005 04:34:15 GMT
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> No, no. I agree with you *completely*. It is nonsense
> in this day and age for IDL to work so poorly out of
> the box. And it is ruinous for people who want to promote
> and sell IDL. Part of my frustration with iTools is that
> I see such a lot of effort on stuff that's not needed,
> and so little attention paid to the simple things that
> could make a world of difference to the people who are
> actually trying to use IDL.

Regarding iTools, the first time iTools was included, I wanted to try things out. I bring up an iTool and click and BOOM! There went my IDL session and I think it even tool my shell along with it. There also went any interest I had in iTools. After a little research, I figured out the problem, but iTools are nothing more than a whiz-bang feature that has no practical application (for me).

> But why are you responding to me! There should be
> a ground swell of letters directed to RSI. Why are

> so many people willing to settle for this?

To whom within RSI do we send our ground swell of letters? Do you think RSI would listen, if we as the IDL newsgroup, came up with a list of the top things we'd most like to see implemented? Instead of each one of us requesting all sorts of different little things, find the things that we have in common and all of us get behind that effort to get it in? Grass roots, baby!! ;-)

-Mike

Subject: Re: Linux Question
Posted by David Fanning on Thu, 17 Feb 2005 04:44:39 GMT
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Michael Wallace writes:

> To whom within RSI do we send our ground swell of letters? Do you think
> RSI would listen, if we as the IDL newsgroup, came up with a list of the
> top things we'd most like to see implemented? Instead of each one of us
> requesting all sorts of different little things, find the things that we
> have in common and all of us get behind that effort to get it in? Grass
> roots, baby!! ;-)

I think we tried that once, to indifferent success. :-)

But, yes, they listen. Why do you think we still have
a Mac version of IDL?

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/

Subject: Re: Linux Question
Posted by Karsten Rodenacker on Thu, 17 Feb 2005 07:55:28 GMT
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Hay, nice thread this night!
Interesting to see how moving such a simple question is!
David, this thread could become a new Tutorial.

To add a bit from me: after years of workstation usage (VMS/Unix/HP), years of PC (mostly Windows, linux (Suse)) I now decided to go over to Mac OS X, enchanted by the seemingly simplicity and the obvious lack of distorted thinking and reasoning mostly caused by usage of Windows.

Even if that might be unrealistic: I think switching on the virgin Mac, installing IDL, running the routines necessary is far better than spending years with troubles and losses caused by Windows/linux problems. And than, after some days/weeks/months of satisfying work I will even decide to use X windows with the (X)emacs (?) running with idlwave ...

Please don't spoil my phantasy! I hope really to overcome this unbelievable corruption of thinking caused by the usage of MS software!

Regards
Karsten

On Wed, 16 Feb 2005 10:54:48 -0700, David Fanning <davidf@dfanning.com> wrote:

> Ok, you Linux guys,
>
> I have to break down and install Linux so I can sort out some
> X Windows problems with my IDL widgets. Which flavor is the easiest
> to install for the, uh, less technically astute members of
> our esteemed organization? :-)
>
> Cheers,
>
> David
>
> P.S. I'll probably put it on an old DELL laptop I have
> around here and have been using as a doorstop.
>

--
Karsten Rodenacker
---------- -------- :-)
GSF - Forschungszentrum Institute of Biomathematics and Biometry
D-85758 Oberschleissheim Postfach 11 29
Karsten.Rodenacker@gsf.de | http://ibb.gsf.de/
http://ibb.gsf.de/homepage/karsten.rodenacker/
Tel: +49 89 31873401 | FAX: ..3369

Subject: Re: Linux Question
Posted by Michael Wallace on Thu, 17 Feb 2005 07:57:36 GMT
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>> To whom within RSI do we send our ground swell of letters? Do you think
>> RSI would listen, if we as the IDL newsgroup, came up with a list of the
>> top things we'd most like to see implemented? Instead of each one of us
>> requesting all sorts of different little things, find the things that we
>> have in common and all of us get behind that effort to get it in? Grass
>> roots, baby!! ;-)
>
>
> I think we tried that once, to indifferent success. :-)

Yeah, okay. Well, it was worth a shot. But what about my first
question: Who to we send our various requests for features? I prefer
to talk to an actual person rather than just send an email off to a
general address and then wonder if anyone actually looked at it.

-Mike

Subject: Re: Linux Question
Posted by Paolo Grigis on Thu, 17 Feb 2005 09:53:25 GMT
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Marshall Perrin wrote:
> David Fanning <davidf@dfanning.com> wrote:
>
>> I am always amazed with what people put up with,
>> but this was really an eye-opening experience.
>> I recommend *anyone* who writes software for a
>> living go spend a couple of months with the end-users.
>> You will never be the same. :-)
>
>
> I feel that someone needs to stand up here and offer a valiant defense
> of the astrophysics community, but I fear it's too late and we've
> all already been irrevocably branded as hopeless luddites. :-)

Thanks Marshall!

>
> I think part of the problem is that IDL ships with poor default settings
> in many cases. It can be configured to do the right thing, if you know
> how to tweak your .idlstartup file to add some DECOMPOSED and RETAIN
> keywords, etc, but you shouldn't have to do that to get reasonable
> functionality! I think many astronomers come to IDL with previous experience

> with things like Matlab or Mathematica, where you *don't* need to do
> that sort of tweaking. Window repaints work correctly in Mathematica
> right away! So when faced with IDL windows that get permanently damaged
> as soon as something passes in front of them, why isn't it reasonable to
> assume that's "just how IDL is"?

Just to *reiterate* it: let's say you've just started you're PhD thesis,
you sit in front of you're shiny new linux box, and just spend a couple
of days and nights learning IDL. You don't feel like a newbye anymore,
and you think you're ready for your first big project:
a nice colored movie of your favorite supernova exploding.
You have made a nice plan in your head on how the animation will
look like and you think you might be optioned for the next academy
award.

Proud, you start coding and displaying your frames... just to find out
your animation looks like it was done in the thirties: desperately black
and white. You think: IDL cannot be so backwards, can't it? Suddenly you
also find out that when you put your mouse cursor over the plot windows,
colors magically show up, making your plot so nice and screwing
everything else up, but who cares if you're nice background image of M81
by Hubble now looks like an old X-ray false color image...
So you gear your hope up, but still find the limitation of having to
keep your mouse on the windows a little harsh. Brilliant idea: check
up the documentation. You type "? colour" at the command line and
a fine message windows tells you: the topic "COLOUR" does not exist.
Fine, you remember RSI HQ being based in colorado and not in colourado,
so you try again "? colour", but that doesn't work either. So what?

Slowly finding you're way through the 10000+ pages of documentation,
you discover on page 3856 of the appendices the section that you should
have read first: "The X Windows Device". You read the chapter carefully
twice, and you summ up your findings: out there exist direct color, true
color, pseudo color, static color, gray scale, static gray. The last 2
don't interest you, since you have already managed B&W, sort of.
So which one should you pick? You learn they come in different flavours,
8 bit, 16 bit, 24 bit. Also there is a mention of colormaps: they come
as shared, private, static (but you find no mention of dynamics ones,
pity, as an astrophysicists you have been trained to think that
hydrodynamics is superior to hydrostatics). So, now, which one will
work for you? Of course the guide does not help you in *that* matter,
so you choose to apply the "scientific method": try out all the
possible combination until you find the one that suits you
(but still you're not really sure why that particular
combination works and the others failed...).

I am sure that the above picture is not too far from the actual
experience of at least some people, and maybe even a few

"computer-wise" ones.

Ciao,
Paolo

>
> That's not to say I disagree completely with the tone of this thread.
> There *are* a lot of people who don't understand computing nearly as
> well as perhaps they should; I'd love to see more computer emphasis
> added to the undergraduate physics curriculum, but the invariable
> faculty response is "but there's already too much material; what
> courses should we drop if we add a computer requirement or two?"
> Still, I think it needs to happen sooner or later. But I see a
> distinction between fundamental issues of numerical data analysis
> (e.g. representation of floating-point numbers, error propagation,
> algorithms, and so on) versus details specific to some individual
> piece of software (setting RETAIN=2 or knowing how to convert between
> DATA and NORMALIZED coordinates, or whatever). One should strive to
> minimize how much of the latter one needs to know, so that you can
> concentrate on the former! In my opinion, something like imdisp or
> tvimage should become *standard* with IDL: too many people out there
> end up learning "tv" first and then getting stuck rolling their own
> more useful display codes from scratch, and that's a waste...
>
> On a regular basis, I program in IDL, C/C++, Perl, Tcl/Tk, various
> shells, and Motorola DSP assembler (and occasionally I end up in
> Python or Fortran too). That menagerie of languages is my problem, not
> yours, but I hope you don't fault me for wanting to get the most
> science done in IDL as possible with the minimum amount of screwing
> around with configuration parameters or learning language esoterica!
> (Same reason why I, and nearly every other astronomer I know, have
> switched to Macs as much as possible: minimal need to screw around for
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> I'll go crawl back in my hole with the other end-users for a while
> now and be quiet again. :-)
>
>
> - Marshall
>

Subject: Re: Linux Question
Posted by Paolo Grigis on Thu, 17 Feb 2005 09:56:47 GMT
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Paolo Grigis wrote:
>

> Marshall Perrin wrote:
>
>> David Fanning <davidf@dfanning.com> wrote:
>>
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>
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> keep your mouse on the windows a little harsh. Brilliant idea: check
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> a fine message windows tells you: the topic "COLOUR" does not exist.
> Fine, you remember RSI HQ being based in colorado and not in colourado,
> so you try again "? colour", but that doesn't work either. So what?
Of course, the second time that was meant to read: "? color"

>
> Slowly finding you're way through the 10000+ pages of documentation,
> you discover on page 3856 of the appendices the section that you should
> have read first: "The X Windows Device". You read the chapter carefully
> twice, and you summ up your findings: out there exist direct color, true
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> Ciao,
> Paolo
>
>>
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>>
>>
>> - Marshall
>>

Subject: Re: Linux Question
Posted by David Fanning on Thu, 17 Feb 2005 10:23:27 GMT
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Paolo Grigis writes:

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> you discover on page 3856 of the appendices the section that you should
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> work for you? Of course the guide does not help you in *that* matter,
> so you choose to apply the "scientific method": try out all the
> possible combination until you find the one that suits you
> (but still you're not really sure why that particular
> combination works and the others failed...).

Here's the problem in a nutshell. But talk about
embellishing an anecdote!

Cheers,

David

P.S. Let's just say an article like this in the morning
gets the day started right! :-)

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/

Subject: Re: Linux Question
Posted by K. Bowman on Thu, 17 Feb 2005 14:19:27 GMT
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In article <1118jkesbdch614@corp.supernews.com>,
Michael Wallace <mwallace.no.spam@no.spam.swri.edu.invalid> wrote:

> Yeah, okay. Well, it was worth a shot. But what about my first
> question: Who to we send our various requests for features? I prefer
> to talk to an actual person rather than just send an email off to a
> general address and then wonder if anyone actually looked at it.
>
> -Mike

If you send an e-mail to support@rsinc.com, it goes into the their
problem logging system and you will get a response. Two actually, an
automatic response and then later a response from a human.

I find the RSI attitude of adding major new components to the language
but not straightening out serious issues with older components to be,
ah..., disappointing. My biggest complaint? The lack of real 24-bit
color support in the PS device driver. It makes coding for both the
screen and for printing a major headache (and nearly impossible to
explain to newcomers).

Ken Bowman

Subject: Re: Linux Question
Posted by R.G.Stockwell on Thu, 17 Feb 2005 16:33:50 GMT
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"Paul Van Delst" <paul.vandelst@noaa.gov> wrote in message

news:cv0kuo$2cj$1@news.nems.noaa.gov...
> David Fanning wrote:
...
>> It's not really a matter of intelligence. Most of the
>> people in an IDL class have advanced degrees in physical
>> sciences. It is something else, and I can't really put my
>> finger on it. (I used to think it was because they were forced
>> to use LINUX computers, but now I know better.) They
>> don't understand programming at all. They don't really
>> know what a variable is, they don't know how to type
>> a program, they don't understand how windows work on
>> their computers. Really basic stuff I would have thought
>> you learned as a physical science undergraduate. But
>> if so, they have forgotten a lot of it.
>
> Ah, I know what you mean. When I first came ot the US ('93) I was amazed
> at the number of graduate students (in science fields) that didn't know
> how computers worked and had never programmed at all. How can that be?!?
> Bizarre. Didn't everybody learn about registers, CPUs, ALUs, Math
> Coprocessors, etc. in their Experimental Methods classes?

I can't tell you how happy this makes me.
I read this and I think "job security", after all, someone has to
know how to compute.
Ahh!

Thanks for the morning "pick me up".

:)

-bob "whistling while he works"

PS and know that I know how to find DLMS, I feel that I may
have achieved complete and utter mastery over all computer related fields.
:)

Subject: Re: Linux Question
Posted by R.G.Stockwell on Thu, 17 Feb 2005 16:36:48 GMT
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"David Fanning" <davidf@dfanning.com> wrote in message
news:MPG.1c7d8f8495b4739b989921@news.frii.com...
...
> Then we get started, and three hours later when
> I find myself saying, "No, *DEVICE* decomposed.
> D-E-V-I-C-E. You are typing DEVIOUS," that I

> realize I'll be fine, that we aren't going very
> far that day or any other.

lol,
a former brilliant co-grad student's thesis commonly had
the typo of INFERNAL CO-ORDINATES instead of
"internal co-ordinates".
I wonder if she also called the DEVIOUS command.

-bob

Subject: Re: Linux Question
Posted by Michael Wallace on Thu, 17 Feb 2005 16:59:53 GMT
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> I am sure that the above picture is not too far from the actual
> experience of at least some people, and maybe even a few
> "computer-wise" ones.

That is the very experience of a lot of us "computer-wise" ones.

-Mike

Subject: Re: Linux Question
Posted by Mr. No Address on Thu, 17 Feb 2005 17:15:27 GMT
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David Fanning wrote:
> Ok, you Linux guys,
>
> I have to break down and install Linux so I can sort out some
> X Windows problems with my IDL widgets. Which flavor is the easiest
> to install for the, uh, less technically astute members of
> our esteemed organization? :-)

I'll suggest SuSE as others have. And while skimming the responses I noticed the issue of IDL windows not regenerating with Linux. I mostly produce postscript files so this hasn't been a big issue for me. I too thought it was the standard behavior. Is there something I can set to fix this.

Subject: Re: Linux Question
Posted by David Fanning on Thu, 17 Feb 2005 18:55:27 GMT

Mr. No Address writes:

> I'll suggest SuSE as others have. And while skimming the responses I
> noticed the issue of IDL windows not regenerating with Linux. I mostly
> produce postscript files so this hasn't been a big issue for me. I too
> thought it was the standard behavior. Is there something I can set to
> fix this.

No, it's just the way it is with IDL. ;-)

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/

Subject: Re: Linux Question
Posted by Michael Wallace on Thu, 17 Feb 2005 19:02:31 GMT

> I'll suggest SuSE as others have. And while skimming the responses I
> noticed the issue of IDL windows not regenerating with Linux. I mostly
> produce postscript files so this hasn't been a big issue for me. I too
> thought it was the standard behavior. Is there something I can set to
> fix this.

If using Direct Graphics:
Device, RETAIN = 2

If using Object Graphics:
w -> SetProperty, RETAIN = 2 ; w is an instance of IDLgrWindow

Look up "backing store" in the IDL documentation for more information on
what this is really doing.

-Mike

Subject: Re: Linux Question
Posted by David Fanning on Thu, 17 Feb 2005 19:06:38 GMT

Michael Wallace writes:

> Yeah, okay. Well, it was worth a shot. But what about my first
> question: Who to we send our various requests for features? I prefer
> to talk to an actual person rather than just send an email off to a
> general address and then wonder if anyone actually looked at it.

Then I guess you have to establish a relationship with
someone at RSI. Your sales person would be a likely
candidate. :-)

Cheers,

David

P.S. Don't discount sales people. They can be *extremely*
motivated to work in your interest if money is at stake. :-)

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/

Subject: Re: Linux Question
Posted by David Fanning on Thu, 17 Feb 2005 19:09:59 GMT

Kenneth Bowman writes:

> I find the RSI attitude of adding major new components to the language
> but not straightening out serious issues with older components to be,
> ah..., disappointing. My biggest complaint? The lack of real 24-bit
> color support in the PS device driver. It makes coding for both the
> screen and for printing a major headache (and nearly impossible to
> explain to newcomers).

Recent changes to PSCONFIG and FSC_COLOR have made this
mostly painless for me, but I couldn't agree more with
how difficult it is to explain. Is 24-bit PostScript hard!?

Cheers,

David

P.S. And while we are at it, *why* do you have to load colors

before you SET_PLOT to a PRINTER device!? Uuggh. *Really*
impossible!

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/

Subject: Re: Linux Question
Posted by Mr. No Address on Thu, 17 Feb 2005 19:33:41 GMT
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Michael Wallace wrote:
>> I'll suggest SuSE as others have. And while skimming the responses I
>> noticed the issue of IDL windows not regenerating with Linux. I
>> mostly produce postscript files so this hasn't been a big issue for
>> me. I too thought it was the standard behavior. Is there something I
>> can set to fix this.
>
> If using Direct Graphics:
> Device, RETAIN = 2
>
> If using Object Graphics:
> w -> SetProperty, RETAIN = 2 ; w is an instance of IDLgrWindow
>
> Look up "backing store" in the IDL documentation for more information on
> what this is really doing.
>
> -Mike

Thanks Mike. Will play with this a bit...

Cheers,
Gary

Subject: Re: Linux Question
Posted by Mark Hadfield on Thu, 17 Feb 2005 20:15:48 GMT
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Karsten Rodenacker wrote:
> Please don't spoil my phantasy! I hope really to overcome this
> unbelievable corruption of thinking caused by the usage of MS software!

Well, I was going to respond, but apparently my thinking has been
corrupted, unbelievably.

--
Mark Hadfield "Ka puwaha te tai nei, Hoea tatou"
m.hadfield@niwa.co.nz
National Institute for Water and Atmospheric Research (NIWA)

Subject: Re: Linux Question
Posted by Michael Wallace on Thu, 17 Feb 2005 20:23:42 GMT
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>> Please don't spoil my phantasy! I hope really to overcome this
>> unbelievable corruption of thinking caused by the usage of MS software!
>
>
> Well, I was going to respond, but apparently my thinking has been
> corrupted, unbelievably.

Quoth the Borg (underwritten by M$), "You have been assimilated.
Resistance is futile."

Subject: Re: Linux Question
Posted by Jonathan Greenberg on Fri, 18 Feb 2005 01:41:03 GMT
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So I have to say I've actually been VERY surprised with how quick RSI is to respond -- I've seen bug reports I've submitted get seriously considered and folded into future releases. I should point out I work mostly with ENVI, using IDL to support remote sensing work. Most of the features have been remote sensing related, which begs the question of whether RSI has a big difference in their IDL techs and their ENVI techs.

David: you are the expert on IDL, one thing I haven't figured out is what does IDL have that Matlab/Octave doesn't? As a remote sensor, I use IDL because of this interface with ENVI. However, why do non-envi users use IDL (except for sheer inertia of not wanting to learn a new program)?

--j

On 2/17/05 12:23 PM, in article 1119vbenc668267@corp.supernews.com, "Michael Wallace" <mwallace.no.spam@no.spam.swri.edu.invalid> wrote:

>>> Please don't spoil my phantasy! I hope really to overcome this
>>> unbelievable corruption of thinking caused by the usage of MS software!
>>

>>
>> Well, I was going to respond, but apparently my thinking has been
>> corrupted, unbelievably.
>
> Quoth the Borg (underwritten by M$), "You have been assimilated.
> Resistance is futile."

Subject: Re: Linux Question
Posted by David Fanning on Fri, 18 Feb 2005 02:56:43 GMT
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Jonathan Greenberg writes:

> David: you are the expert on IDL, one thing I haven't figured out is what
> does IDL have that Matlab/Octave doesn't? As a remote sensor, I use IDL
> because of this interface with ENVI. However, why do non-envi users use IDL
> (except for sheer inertia of not wanting to learn a new program)?

In a word, objects. :-)

Cheers,

David

P.S. I'm not sure there is much difference between Matlab and
IDL users. You would be better off asking why some people are
Methodist and some people are Baptist. It's just a matter of
preference, I guess. :-)

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/

Subject: Re: Linux Question
Posted by mperrin+news on Fri, 18 Feb 2005 05:24:08 GMT
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David Fanning, Ph.D. <david@dfanning.com> wrote:
> Jonathan Greenberg writes:
>
>> David: you are the expert on IDL, one thing I haven't figured out is what
>> does IDL have that Matlab/Octave doesn't? As a remote sensor, I use IDL
>> because of this interface with ENVI. However, why do non-envi users use IDL
>> (except for sheer inertia of not wanting to learn a new program)?

>
> In a word, objects. :-)

Another answer, also related to intertia, is the sheer mass of already
existant code. Speaking again from the parochial perspective of us
star-gazers, I can't imagine any mass migration until Matlab or Octave
have something comparable to the Goddard idlastro library.
Notably, the Python guys are actually working on creating just such a thing;
I'll be very interested to see how that progresses in coming years.

- Marshall

Subject: Re: Linux Question
Posted by Paul Van Delst[1] on Fri, 18 Feb 2005 15:25:06 GMT
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David wrote:
> Jonathan Greenberg writes:
>
>
>> David: you are the expert on IDL, one thing I haven't figured out is what
>> does IDL have that Matlab/Octave doesn't? As a remote sensor, I use IDL
>> because of this interface with ENVI. However, why do non-envi users use IDL
>> (except for sheer inertia of not wanting to learn a new program)?
>
>
> In a word, objects. :-)

I disagree mightily with that, but anyway....

Hasn't matlab been object based from the get go? For example, the standard out-of-the-box
"plot" in matlab (or , at least, the window that the plot is displayed in) has the
functionality that I lay awake at night dreaming about for IDL plots. You can zoom, change
the line properties, print, etc. You can probably create legends too (but I'm not sure).
This is how a regular old "plot" should work in IDL. I guess iTools are the attempt to do
this in IDL.

As to the OP question of "why do non-envi users use IDL" ? Well, in my case, it's because
the matlab licensing procedure appears (horror of horrors) to be even more labyrinthine
than that for IDL (how can that be!?!). Oh, and:
- I have a crapload of IDL code
- Everything in matlab seems to be a string, 4-byte integer, or 8-byte real. What's
  the go with that?

> P.S. I'm not sure there is much difference between Matlab and
> IDL users. You would be better off asking why some people are
> Methodist and some people are Baptist. It's just a matter of

> preference, I guess. :-)

It's not intrinsic though - a learned response *can* be unlearned (be it computer languages or religions). Once the aforementioned inertia is overcome, of course. (For some reason the the song "We shall not be moved" just popped into my head.... :o)

paulv

--
Paul van Delst
CIMSS @ NOAA/NCEP/EMC

Subject: Re: Linux Question
Posted by David Fanning on Fri, 18 Feb 2005 15:43:47 GMT
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Paul Van Delst writes:

>> In a word, objects. :-)
>
> I disagree mightily with that, but anyway....

I meant in the sense of a programming language construct.
There is nothing similar in MatLab, to my knowledge.
And, frankly, I wouldn't even consider a language these
days that didn't allow me to start my day writing another
object. They are just that much fun! :-)

> Hasn't matlab been object based from the get go? For example, the standard out-of-the-box
> "plot" in matlab (or , at least, the window that the plot is displayed in) has the
> functionality that I lay awake at night dreaming about for IDL plots. You can zoom, change
> the line properties, print, etc. You can probably create legends too (but I'm not sure).
> This is how a regular old "plot" should work in IDL. I guess iTools are the attempt to do
> this in IDL.

I guess you are right, but why aren't people using
them, then? When I am in the field I hear, "Oh, I tried
that, but it seemed too complicated.", or "I couldn't
figure it out." Maybe the tutorials will help (assuming
we can get the directions to match the save files).

> As to the OP question of "why do non-envi users use IDL" ? Well, in my case, it's because
> the matlab licensing procedure appears (horror of horrors) to be even more labyrinthine
> than that for IDL (how can that be!?!). Oh, and:
> - I have a crapload of IDL code
> - Everything in matlab seems to be a string, 4-byte integer, or 8-byte real. What's
> the go with that?

I was just thinking in the shower that one of the reasons MatLab
can get retaining of windows right from the start is that it
probably *always* does the equivalent of RETAIN=2. IDL is
probably more flexible than MatLab in any number of ways, which
is it's power and curse. What IDL does wrong, I think, is
assume the user is going to read the documentation. It needs
better default cases, and the documentation needs to be written
from the point of view of a user and not a developer, especially
with regard to how to get your computer set up to work with
IDL. (Oh, and then they could fix the TV command so that it
works like IMGDISP or TVIMAGE, but I guess that's another story.)

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/

Subject: Re: Linux Question
Posted by btt on Fri, 18 Feb 2005 16:01:52 GMT
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Paul Van Delst wrote:

> David wrote:
>
>> Jonathan Greenberg writes:
>>
>>
>>> David: you are the expert on IDL, one thing I haven't figured out is
>>> what
>>> does IDL have that Matlab/Octave doesn't? As a remote sensor, I use IDL
>>> because of this interface with ENVI. However, why do non-envi users
>>> use IDL
>>> (except for sheer inertia of not wanting to learn a new program)?
>>
>>
>>
>> In a word, objects. :-)
>
>
>
> As to the OP question of "why do non-envi users use IDL" ? Well, in my

> case, it's because the matlab licensing procedure appears (horror of
> horrors) to be even more labyrinthine than that for IDL (how can that
> be!?!). Oh, and:
> - I have a crapload of IDL code
> - Everything in matlab seems to be a string, 4-byte integer, or 8-byte
> real. What's
> the go with that?

Well, I dunno. Your info might be a bit dated. The link below points to the
very nice online MatLab help system - in particular look at the 'Data Types'
link on the page. This shows that MatLab seems to comparable data types (except
complex, I think) and that there exists such a thing as 'User Class'. I
couldn't begin to tell you if they are comparable to IDL objects.

http://tinyurl.com/3gpdo

Tears,
Ben

Subject: Re: Linux Question
Posted by Michael Wallace on Fri, 18 Feb 2005 17:18:32 GMT
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> I meant in the sense of a programming language construct.
> There is nothing similar in MatLab, to my knowledge.
> And, frankly, I wouldn't even consider a language these
> days that didn't allow me to start my day writing another
> object. They are just that much fun! :-)

Java objects are fun. IDL "Objects" are.... lets not go there. ;-)

>> Hasn't matlab been object based from the get go? For example, the standard out-of-the-box
>> "plot" in matlab (or , at least, the window that the plot is displayed in) has the
>> functionality that I lay awake at night dreaming about for IDL plots. You can zoom, change
>> the line properties, print, etc. You can probably create legends too (but I'm not sure).
>> This is how a regular old "plot" should work in IDL. I guess iTools are the attempt to do
>> this in IDL.
>
>
> I guess you are right, but why aren't people using
> them, then? When I am in the field I hear, "Oh, I tried
> that, but it seemed too complicated.", or "I couldn't
> figure it out." Maybe the tutorials will help (assuming
> we can get the directions to match the save files).

My problem with iTools was that you can't use them pro grammatically.
Say I create an iplot and add a few annotations and get something that I

really like. I'd like the ability to save off the positional and size information to a template and use that template over and over as I iterate through my data. Load the template, set the X data vector, set the Y data vector, set the title strings, and save the view off to a file.

I guess what I'm describing is using the iTool to handle your object graphics code for you. It's much easier to define the look of plot if you're able to do it graphically rather than messing with the code for all the views, models, plots and other objects. It would simplify the coding greatly and as such would be less error prone.

Back when iTools were introduced I was told from someone at RSI that you couldn't do stuff like this. Everything was designed to be used in an ad hoc way. Even something as simple as pro grammatically switching out your data vectors only wasn't possible. What's the point of using the iTool if you can't reuse it?

-Mike

Subject: Re: Linux Question
Posted by Rick Towler on Fri, 18 Feb 2005 17:54:03 GMT
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Wow, this thread has covered a lot of ground....

Paul Van Delst wrote:
> David wrote:
>
>> Jonathan Greenberg writes:
>>
>>
>>> David: you are the expert on IDL, one thing I haven't figured out is
>>> what does IDL have that Matlab/Octave doesn't?
>>
>> In a word, objects. :-)
>
> I disagree mightily with that, but anyway....
>
> Hasn't matlab been object based from the get go?

As of release 7 it has a mature, fully implemented object API. More so than IDL. Most everything is an object. This probably raises the bar a bit for entry into the object club though. IDL's object API is really easy to pick up. I was a master after a few days of David's tutelage. ;)

> For example, the standard out-of-the-box "plot" in matlab
> has the functionality that I lay awake at
> night dreaming about for IDL plots. You can zoom, change the line
> properties, print, etc. You can probably create legends too (but I'm not
> sure). This is how a regular old "plot" should work in IDL. I guess
> iTools are the attempt to do this in IDL.

Exactly! And if you take much of what has been said in this thread about "kids these days" and how they don't know anything maybe some of you can see why iTools was born?

The first time I threw up a plot window in MATLAB I was amazed... So is just about everyone else who has used products like these. Given a choice between this and IDL's direct graphics it is a no-brainer.

Sure, iTools have many limitations but I suspect they will be addressed in future releases.

> - Everything in matlab seems to be a string, 4-byte integer, or 8-byte
> real. What's the go with that?

As of Release 7 you have all of your standard types: char, int8-int48, uint8-uint64, single, double, complex. And like I said, they're all objects :)

Other high points?

A great GUI builder where all of the GUI code is hidden, you just deal with a .m file containing the callbacks (Although IDL does have more widgets I am so sick of coding GUIs by hand.) *TIGHT* Java integration:

```
import java.util.GregorianCalendar;
import java.util.TimeZone;
startCal = GregorianCalendar(1601, 0, 1);
gmt = TimeZone.getTimeZone('GMT');
startCal.SetTimeZone(gmt)
```

Holy cow. Is that Java? MATLAB? Who cares, it works? The MATLAB compiler is pretty cool too. The user community website is far more friendly than RSI's. It has a built in C compiler to build MATLAB's version of .dlms!

MATLAB has some major shortcomings for an IDL user: It doesn't pass by reference (well, not the way you want it too) and it doesn't have KEYWORDS (well I don't consider result=myFunc(argIn, 'keyword1', data1,

'keyword2, 'data2') keywords.) The licensing is a PITA. MATLAB is just as quirky as IDL, maybe more so if you are used to IDL's quirks and consider them "normal". And try posting on comp.soft-sys.matlab... With hundreds of posts a day it just isn't as friendly as c.l.idl-pvwave (And there is *no one* posting about their personal adventures or their tennis game!)

So at the very least RSI has some stiff competition and they will need to deliver a quality product and nurture their user base. Michael started an offshoot regarding (more or less) the latter point. As for feature requests, I have found RSI to be very receptive. There is a lot more they could do on the nurturing front though (they still owe me some posters and t-shirts!) The user contrib site is a great idea but the interface sucks and the "newsgroup" on the RSI website is just a mean trick. Those poor users who post there...

-Rick

Subject: Re: Linux Question
Posted by Michael Wallace on Fri, 18 Feb 2005 22:24:26 GMT
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> If using Object Graphics:
> w -> SetProperty, RETAIN = 2   ; w is an instance of IDLgrWindow

Oops. I'm spreading disinformation again. RETAIN can't be set using SetProperty. The only time you can set RETAIN at the time of initialization.

w = Obj_New('IDLgrWindow', RETAIN = 2)

-Mike

Subject: Re: Linux Question
Posted by David Fanning on Fri, 18 Feb 2005 23:54:46 GMT
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Rick Towler writes:

> And try posting on comp.soft-sys.matlab...
> With hundreds of posts a day it just isn't as friendly as c.l.idl-pvwave
> (And there is *no one* posting about their personal adventures or their
> tennis game!)

I should check it out. Sounds like they could use some
new ideas over there. :-)

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/

Subject: Re: Linux Question
Posted by Nigel Wade on Mon, 21 Feb 2005 09:40:50 GMT
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Jonathan Greenberg wrote:

> So I have to say I've actually been VERY surprised with how quick RSI is
to
> respond -- I've seen bug reports I've submitted get seriously considered
and
> folded into future releases. I should point out I work mostly with ENVI,
> using IDL to support remote sensing work. Most of the features have been
> remote sensing related, which begs the question of whether RSI has a big
> difference in their IDL techs and their ENVI techs.
>
> David: you are the expert on IDL, one thing I haven't figured out is what
> does IDL have that Matlab/Octave doesn't?

Direct graphics. Everything in MATLAB is an "object". When you plot millions
of little blocks, every block is an "object" containing its coordinates,
the fill colour, the fill style, the outline colour, the outline style etc.
The overhead is enormous.

The ability to work with non-double-precision numbers. Whilst MATLAB allows
you to create matrices containing non-DP numbers, you can't actually do
anything with them. Try adding 1 to one for example - result "that
operation is not supported".

A draconian licensing model. IDL requires 1 license per user per host. That
user can run any number of IDL sessions on the same host and requires only
1 license. MATLAB requires 1 license per invocation.

MATLAB comes as a pretty bare installation. If you want any functionality to
get some real work done you are going to have to cough up additional money

for some toolboxes.

--
Nigel Wade, System Administrator, Space Plasma Physics Group,
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Phone : +44 (0)116 2523548, Fax : +44 (0)116 2523555
