
Subject: Re: On the differences between idl and pvwave

Posted by [keller](#) on Fri, 20 Sep 1991 03:12:51 GMT

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In article <51116@netnews.upenn.edu> yee@mipgsun.mipg.upenn.edu (Conway Yee) writes:(only slightly trimmed)

>

> From what I understand, the company that markets pvwave licensed
> idl and markets it under their own name. In the near future, my
> lab will be purchasing idl/pvwave. From what I can see, the two
> are identical products. What are the essential differences between
> the two and which should we buy?

At the National Severe Storms Lab we have IDL. My local university, which shall go unnamed, bought PVWAVE.

They are indeed 99% the same product.

The essential differences:

Graphics commands especially go by the 'keyword' concept in PVWAVE, while IDL goes (VAX version) by 'parameters':

IDL> CONTOUR,agrid,[1,2,5,10,20,50,100]

WAVE>CONTOUR,agrid,labels=[1,2,5,10,20,50,100]

The latter is too much typing for an INTERACTIVE programming language IMO.

I also believe that the former is better for 'sophisticated' programming where you might build commands then execute them (if you are so inclined).

Also, both come with a 'user library', sort of a small scale IMSL-like set of routines. IDL's is useful. PVWAVE's was full of bugs.

PVWAVE comes with a 'window based tutorial' which I found simply a nuisance.

The way to learn IDL, like any programming language, is by cloning some short and sweet programs that do typical things (I have such a set of screen size programs that do elementary plotting, contouring, map drawing, map plotting, basic image things, etc...call me).

I could ramble a long time on this. IDL is a good scientific programming language. I used to use FORTRAN, now I use IDL. I am willing to provide information, ranging from getting a sample manual to you, to sending real programs that do real science.

Dave Keller "I own no stock in Research Systems Incorporated"

Subject: Re: On the differences between idl and pvwave

Posted by [dwight](#) on Fri, 20 Sep 1991 15:54:25 GMT

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 |>information, ranging from getting a sample manual to you, to sending real
 |>programs that do real science.
 |>
 |>Dave Keller "I own no stock in Research Systems Incorporated"
 |>
 |>

We, this certainly deserves a response (being we are the local University that bought PVWAVE).

1). For people who know PVWAVE, one does not have to use keywords but can achieve the

same 'parameter' effect of IDL by programming the procedure appropriately...so this point

is invalid. The keyword concept is both useful and good. It provides a way of checking

if a parameter is present and providing a default if it is not present.

Furthermore, if all one

does is interactive programming, then the user/"programmer" loses much of the power and flexibility of both systems.

2) PVWAVE comes with a much larger library than IDL which I have found to be very useful

and since I have used PVWAVE quite a bit, I have found only a few bugs (no more than most

software, and their tech support has been very helpful). I can not speak for IDL, but I doubt

Dave can speak for PVWAVE.

3) PVWAVE's tutorial in windows can be a bit sluggish at times, but

hey...windows are not

anybody's race horse...and after all, both systems are little more than an
interpretive compiler

which are not speed daemons in themselves, verses compilers that generate
machine code.

PVWAVE supplies many of the "sweet" programs that Dave has but are
supported and probably
better written.

4) IDL/PVWAVE are good for basic data manipulation and graphs, for anyone who
does real

scientific work, I would suggest doing most of your computations in
FORTRAN or any other

such language for speed and generate a file of data or graph points and use
one or more of

these tools for final analysis. I doubt any reasonable person who does any
large or medium

scale computing would advocate replacing FORTRAN et.al. with IDL or
PVWAVE.

I don't advocate IDL over PVWAVE or vice versa. Precision Visuals did a very
good job of

marketing their product and we've been happy with what we have and I use PVWAVE
frequently

for a variety of used and has been invaluable in many cases for graphics for
Master/PhD

thesis/dissertations as well as image processing.

It appears to me that both products are good and useful. They are now on
separate development

paths since they have ended their business relationship. Find the one that best
fits your

economic and computing needs and choose it. Lets get rid of this needless
tirade/boring discussion

of which is better much less what their differences are (at least until later
products). Both

have the same capabilities for the most part.

Pax

Dwight D. Moore
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Sorry, no cute quotes this time. Oh hell, what the heck...I don't own stock in
either

IDL or Precision Visuals.

Geosciences Computing Network

University of Oklahoma

dwright@geohub.gcn.uoknor.edu (129.15.40.10)

These opinions do not necessarily represent the opinions of OU or the GCN.
(Sorry to disappoint you, no cute quote this time.)

Subject: Re: On the differences between idl and pvwave

Posted by [jennifer](#) on Fri, 20 Sep 1991 19:25:02 GMT

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Just this morning I noticed another difference between IDL and WAVE
-- WAVE is supposed to support CGM output whereas IDL does not claim
to. Unfortunately, it turns out that the WAVE CGM does not conform
to the standard. This is a problem for me, as the software that
drives our film recorder supports CGM, but chokes on the files
from WAVE. The film recorder does not support any of the other
formats written by IDL or WAVE. I was hoping RSI would have solved
the non-standard CGM problem, but CGM is not listed in the supported
"devices." Has anyone come up against this problem, or have any
suggestions for me?

Thanks,

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Subject: Re: On the differences between idl and pvwave

Posted by [hunt](#) on Fri, 20 Sep 1991 19:50:36 GMT

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IDL has keyword parameters too, in version 2.0. I believe it is backward
compatible and can still understand the non-keyword versions of commands too.
It has been my experience that IDL customer support is very responsive.

It would be interesting to know how the whole thing with IDL/PV-WAVE happened--
seems kind of strange!

Linda Hunt

Subject: Re: On the differences between idl and pvwave

Posted by [bdavis](#) on Mon, 23 Sep 1991 17:42:24 GMT

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In article <1991Sep20.192502.9749@news.arc.nasa.gov> jennifer@gaia.arc.nasa.gov (Jennifer Dungan) writes:

> Just this morning I noticed another difference between IDL and WAVE
> -- WAVE is supposed to support CGM output whereas IDL does not claim
> to. Unfortunately, it turns out that the WAVE CGM does not conform
 (other lines delete)

Actually, IDL produces NCAR Graphics Metacode files which are CGM files.
I'll bet the WAVE code is the same, but they may have "improved" it. My
limited experience with the NCAR CGM files are that they were fine
except their text size has a bug (or is non-standard CGM) -- text which
looks fine from NCAR routines is tiny from CGM translators.

Subject: Re: On the differences between idl and pvwave

Posted by [thompson](#) on Tue, 24 Sep 1991 20:23:49 GMT

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In article <1991Sep20.031251.29717@uokmax.ecn.uoknor.edu>,
keller@nsslsun.nssl.uoknor.edu (Dave Keller) writes...

> Graphics commands especially go by the 'keyword' concept in PVWAVE, while
> IDL goes (VAX version) by 'parameters':
> IDL> CONTOUR,agrid,[1,2,5,10,20,50,100]
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> I also believe that the former is better for 'sophisticated' programming
> where you might build commands then execute them (if you are so inclined).

You're using an *OLD* version of IDL. This is comparing apples and oranges.
Keywords originated in IDL (version 2) before IDL and PVWAVE split apart.

Keywords are an immensely useful concept. The sophistication of my IDL
software has increased exponentially since keywords were introduced. It is a
hell of a lot easier for *OPTIONAL* information to propagate through a chain of
subroutines if the keyword concept is used.

Bill Thompson
