
Subject: Re: IDL or PV~Wave?

Posted by [knight](#) on Fri, 21 May 1993 16:44:03 GMT

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In article <C7B1GH.1Ft@cbnews.cb.att.com>, ft@maxwell.ccs.att.com (Frederick True) writes:

|> I'm considering purchasing either IDL or PV~Wave for some large modeling ...

|>

|> BTW I have read the FAQ, but am looking for a more opinionated view!

Here are some features added to IDL since v2.1 that I particularly like:

---integrated support for HDF, CDF, and netCDF.

---on-line help in a separate window

---IOCTL to access low-level file operations

---logarithm Z axis for surface plots

---anonymous structures

---create_struct (v3.1)

---reads: like readf only from an IDL variable instead of from a file

---device independent screen preview in EPSI format to see IDL plot in desktop publishing programs

---integrated TIFF and GIF support

---format capability for tick labels on plots

Are there PV~WAVE equivalents?

Fred

--

=Fred Knight (knight@ll.mit.edu) (617) 981-2027

C-483\\MIT Lincoln Laboratory\\244 Wood Street\\Lexington, MA 02173

Subject: Re: IDL or PV~Wave?

Posted by [landers](#) on Fri, 21 May 1993 20:12:13 GMT

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In article <1993May21.164403.1583@ll.mit.edu>, knight@ll.mit.edu (Fred Knight) writes:

|>

|> In article <C7B1GH.1Ft@cbnews.cb.att.com>, ft@maxwell.ccs.att.com (Frederick True) writes:

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|> Here are some features added to IDL since v2.1 that I particularly like:

|>

|> [.....]

|>

|> Are there PV~WAVE equivalents?

Comparing with PV Wave vers 4.01

|> ---integrated support for HDF, CDF, and netCDF.
don't know about this

|> ---on-line help in a separate window
yes. Hypertext. fork from inside Wave or from OS prompt.
The vast majority of the reference manual is there, and some of the users guide.
Version 4.2 (Jun/Jul 93) is supposed to have the ENTIRE manual set on line,
supposedly word-for-word.

|> ---IOCTL to access low-level file operations
not directly, but you could wrap these in C calls...

|> ---logarithm Z axis for surface plots
yes, but it's not great

|> ---anonymous structures
yes

|> ---create_struct (v3.1)
to create a structure from tagnames and values, I assume
As part of the SQL table functions, there's BUILD_TABLE, which builds a
structure given tag names and values.

|> ---reads: like readf only from an IDL variable instead of from a file
that sounds nice - not directly available in Wave

|> ---device independent screen preview in EPSI format to see IDL plot in desktop
|> publishing programs
yes

|> ---integrated TIFF and GIF support
TIFF, Sun Raster file, but no GIF

|> ---format capability for tick labels on plots
yes. can specify format of labels, what their values are, where to put them, and
you can even use strings or Date/Time labels

--

@std_disclaimer.pro

Subject: Re: IDL or PV~Wave?

Posted by [alan](#) on Mon, 24 May 1993 15:41:42 GMT

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In article <1993May21.164403.1583@ll.mit.edu> knight@ll.mit.edu (Fred Knight) writes:

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programs
> ---integrated TIFF and GIF support
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>
> Are there PV~WAVE equivalents?

Not that I know of. It's hard to know what some of these things are (e.g., anonymous structures). The question really is, what do you need? Wave has Motif lookalike functions that allow one to develop Motif GUIs very rapidly. In addition to their regular widgets. And I find the Wave widgets easier to use. Wave doesn't crash on me, locking up my workstation. Perhaps the stuff you've cited is critical to other people, but for me Wave offers the right combination of reliability and flexibility (and polish) that I need. I recommend it enthusiastically.

--

-- Alan # Mountain Dew and doughnuts...
..!ames!elroy!alan # because breakfast is the most important meal
alan@elroy.jpl.nasa.gov # of the day.

Subject: Re: IDL or PV~Wave?

Posted by [thompson](#) on Mon, 24 May 1993 21:41:22 GMT

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alan@elroy.Jpl.Nasa.Gov (Alan S. Mazer) writes:

> In article <1993May21.164403.1583@ll.mit.edu> knight@ll.mit.edu (Fred Knight) writes:

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>> Are there PV~WAVE equivalents?
```

```
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> --
>
> -- Alan # Mountain Dew and doughnuts...
> ..!ames!elroy!alan # because breakfast is the most important meal
> alan@elroy.jpl.nasa.gov # of the day.
```

Sounds like you must have had a bad experience with IDL somewhere along the line. Just for the record, IDL has never locked up my workstation, and I don't know anybody for whom it has. I certainly don't think of IDL as an unreliable product, and certainly have no reason to believe that PV-Wave is going to be any more (or less) reliable. :^)

Anonymous structures are unnamed structures that the user creates on the fly. It's easier to explain by describing named structures first. For instance, suppose I define a named structure through the command

```
IMAGE = {SOHO_IMAGE, IMAGE: INTARR(1024,1024,/NOZERO), $
  PMT: 0.0, $
  X: 0L, $
  Y: 0L, $
  Z: 0L}
```

then the name of this structure is SOHO_IMAGE. I can then define variables as being of this datatype, e.g.

```
A = {SOHO_IMAGE}
```

However, once a structure is defined, then it is static. For instance, A.IMAGE will always be a 1024x1024 integer array.

Anonymous structures are defined on the fly, and are thus more dynamic. For example, if I write

```
A = {IMAGE: myimage,  
     PMT: pmt-reading,  
     X: x-value,  
     Y: y-value,  
     Z: z-value}
```

then A doesn't have a structure name associated with it. I can thus create structures with just the structure that I need when I need it, rather than defining it for once and always at the start of the program as in C or FORTRAN. In IDL anonymous structure variables can be redefined dynamically.

Bill Thompson

Subject: Re: IDL or PV~Wave?

Posted by [zawodny](#) on Tue, 25 May 1993 11:35:50 GMT

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In article <1tqqbm\$qm@elroy.jpl.nasa.gov> alan@elroy.Jpl.Nasa.Gov (Alan S. Mazer) writes:

> (stuff deleted)

> In addition to their regular widgets. And I find the Wave widgets easier to
> use. Wave doesn't crash on me, locking up my workstation. Perhaps the
> stuff you've cited is critical to other people, but for me Wave offers the
> right combination of reliability and flexibility (and polish) that I need.

Well that is quite a set of accusations. In my 12+ years of IDL programming I can never recall IDL crashing the system or "locking up my workstation". I did see an alpha release of IDL for the PC bomb once but, my IDL for Windows has performed flawlessly.

On the subject of widgets and GUI's, I have found that the IDL widgets are actually quite easy to use. I went from never having seen a widget procedure to having a working (and useful) widget based program of intermediate complexity in one day (8 hours). I can't think of anything easier unless someone were to write it for me.

I think a major point of consideration when selecting a software package is the track record of the company your dealing with. While I can say nothing to the pro or con with respect to Visual Numerics (formerly PVI), I have found the folks at RSI very helpful and competent. Very frequently, I find things that I have suggested as a potential improvement to IDL appearing in a latter release.

--

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Subject: Re: IDL or PV~Wave?

Posted by [pendleton](#) on Tue, 25 May 1993 16:09:31 GMT

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> Well that is quite a set of accusations. In my 12+ years of IDL programming I
> can never recall IDL crashing the system or "locking up my workstation". I did
> see an alpha release of IDL for the PC bomb once but, my IDL for Windows has
> performed flawlessly.
>

Under IDL version 1, there used to be a neat trick using multiple "\$" (spawn)
commands which would reliably crash dump a VAX. No privs required.

This has since been cleaned up, of course.

> --
> Joseph M. Zawodny (KO4LW) NASA Langley Research Center
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