
Subject: Re: IDL/PV-Wave - Can they strip headers in binary files?

Posted by [thompson](#) on Fri, 18 Jun 1993 13:18:08 GMT

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gnaa38@aero.gla.ac.uk (Paul Porcelli) writes:

- > Could someone tell me how IDL or PV-Wave copes with displaying data from a
- > binary file which has a header of various types (ie int,float,string) and
- > which also defines the number of records in the file.
- > Would the header have to be stripped first by another program?
- > I am specifically interested in how easy it is to read from a file of
- > this type and output the data in a graphical format(ie plot etc).
- > Are any of the two products more suited to this task?
- > Any help will be greatly appreciated.
- > Thanks.

IDL and PV-wave both have the same kind of I/O capabilities as a third-generation language such as FORTRAN and C. (In fact, FORTRAN-style FORMAT specifications are supported.) This means that you can write a fairly simple routine to read in and parse the header and data in your table. Routines for some standard file formats, such as FITS, have already been written using standard IDL/PV-wave calls. However, it's a fairly simple matter to write a reader routine yourself if you know what the format of the file is.

Once you've read the data into arrays, you can then plot it in the normal matter.

Both IDL and PV-wave are likely to be equally capable in reading files. In fact, a program written in one will probably work in the other.

Bill Thompson

Subject: Re: IDL/PV-Wave - Can they strip headers in binary files?

Posted by [ft](#) on Fri, 18 Jun 1993 20:26:20 GMT

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In article <9306171303.AA03092@tiger moth.aero.gla.ac.uk> gnaa38@aero.gla.ac.uk (Paul Porcelli) writes:

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In PV-Wave (and maybe IDL too, I haven't used it) you can use the `assoc()` command to associate a binary file with a variable, including parsing of the binary data into array structures, and skipping of header data. Eg:

```
avar=assoc(lun,bytarr(512,512),1024B)
```

Where `lun` is the unit number of an opened file, the byte array is the desired parsing format of the data, and `1024B` skips 1024 bytes of header in the file. Then, you can access chunks of the file as:

```
image1=avar(0) ; first 512x512 byte image  
image2=avar(1) ; second...
```

The data is not read from the file until the associated variable is assigned to something else (which can be done in a command, like: `"tv,avar(0)"`). As I understand it, the offset and the array structure can be specified as any data type (byte, int, long, float, etc), so you can parse the file as you like.

Then, you can use any of the image commands (`tv`, `tvsc1`, `rot`, `fft`, etc) on the array structure (if it's an image).

PV-Wave also has precut commands for reading various graphics formats (in version 4.1 - I understand there will be more of these in 4.2 in a few months):

```
dc_read_8_bit(filename) ; read 8 bit raster file  
dc_read_24_bit(filename) ; read 24 bit raster file  
dc_read_tiff(filename) ; read TIFF format image (no jpg support tho)
```

```
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