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Subject: Re: Coding for speed help needed  
Posted by [Liam Gumley](#) on Fri, 30 May 1997 07:00:00 GMT  
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Patrick V. Ford wrote:

- > pop\_size = 36; this can vary greatly
- > dim = 64
- > B = bytarr( dim \* dim \* 5 \* pop\_size)
- > There are pop\_size individuals
- > The first 64\*64 (dim\*dim) bytes code for the activity or intensity in a 64
- > by 64 image. The next 4\*64\*64 bytes code for the attenuation coefficients
- > which are
- > between 0.0 and 1.0, where 1.0 is no attenuation and 0.0 is 100%.

Patrick,

Are you familiar with structures in IDL? Any time you have to read mixed datatypes from a datafile, structures are usually the easiest way to do it. For example, let's say that on disk you have (in one contiguous file),

- a byte array of size 64x64
- a float array of size 64x64

then to read it, you would do something like this:

```
openr, lun, 'input.dat', /get_lun
data = { array1 : bytarr( 64, 64 ), array2 : fltarr( 64, 64 ) } ;
structure definition
readu, lun, data ; read the structure from disk
free_lun, lun
print, data.array1( *, 0 ) ; print the first 64 elements of the byte
array
print, data.array2( *, 0 ) ; print the first 64 elements of the float
array
```

Then if you need to swap byte order, all you have to do is

```
data = swap_endian( data )
```

which will take care of all the data types in the structure.

Cheers,  
Liam.

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