Subject: Convert 8 byte array to double
Posted by LNpellen on Wed, 21 Dec 2016 10:25:06 GMT
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I'm working with DICOM files where a floating number is saved as BYTE array[8] and I know (at least pretty sure) it is a double precision floating number, but I cannot figure out how to convert it to DOUBLE.

```
IDL> help, a
A    BYTE      = Array[8]
IDL> print, a
  51  51  51  51  51  51 227  63
IDL> print, string(a)
333333ã?
IDL> print, string(a, format='(Z)')
    33      33      33      33      33      33      E3      3F
IDL> print, double(a)
      51.000000       51.000000       51.000000       51.000000       51.000000       51.000000
227.00000       63.000000
```

I understand that I can calculate it myself, but that will require a whole lot of code and quite some reading to understand howto. Anybody know of an easier way? As DOUBLE really is a 64bit number...

I have also a feeling that this is swapped endian, or what it is called. (3F first, 33 last).

Subject: Re: Convert 8 byte array to double
Posted by Heinz Stege on Wed, 21 Dec 2016 10:47:32 GMT
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Try:

```
a=[51b,51b,51b,51b,51b,51b,227b,63b]
print,float(a,0,1)
```

or if swapped:

```
print,float(reverse(a),0,1)
```

HTH, Heinz

Subject: Re: Convert 8 byte array to double
Posted by Heinz Stege on Wed, 21 Dec 2016 11:19:06 GMT
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One more thought: Of course you have to use double instead of float.
If you are expecting 0.6 as the result, the given number is little
endian. This can be considered in by:

litle_endian=byte(1s,0,1)
print,double(litle_endian? a : reverse(a),0,1)

Cheers, Heinz
