Subject: number of decimals?
Posted by Y.T. on Thu, 09 Dec 2004 04:49:24 GMT
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I've almost decided that the following is impossible in IDL, but I figured I'd give it one more try...

I have a large dblarray of numbers -- say ten by ten million or so:

IDL> f = dblarr(10,1e7)
IDL> f = 1000.*randomn(seed,1e8)

(In reality these are real data values, not random numbers, of course).

I'd like to write these to a file (in the sense of a printf) with an accuracy of two digits behind the decimal point. I COULD do something like the following:

IDL> printf,unit,f,format='(10f9.2)'

but that'll introduce additional spaces wherever a number is smaller than 10000. So a typical line might look like this:

123.45 678.23 1.23 12345.67 ...
etc

But what I want is

123.45 678.23 1.23 12345.67 ...

What I'm trying to do would be written in C somewhat like this: "%.2f %.2f %.2f", i.e. a floating point number with two decimals.

The help tells me that I can specify the total width as zero to obtain a "natural width" but if I do a "f0.2" in the above example, I get things like

123.450000000 678.23000000 1.23000000 12345.6700000000 ...

I have looked into the %"... form of the 'format' keyword but that only supports "%w.n" forms, not "%.n" forms.

For now, I am doing something unspeakably ugly like this:

printf,strcompress(string(f,format='(10f9.2)'))

which is reasonably workable as long as f is less than about 1/4 of my

total memory -- otherwise the various conversion start swapping and all hell breaks loose.

I understand that I could do this simply line by line with strcompress, but that takes approximately a metric forever.

Is there some trick or something that allows me to write a number with two decimals and "just the right number of digits" before the decimal point?

Thanks in advance...
cordially

Y.T.

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