Subject: Re: Set Precision???????????
Posted by Liam Gumley on Mon, 14 Jun 1999 07:00:00 GMT
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Anil Kochhar wrote:
> I'd like create a varible which always holds numbers out to 6 places
> passed the decimal point, and 4 numbers before the decimal point (e.g.
> 1999.123456). I tried double
> precision but this seems to only hold 8 digits total for decimal numbers.
> However I would like to create a variable corresonding to a fraction of a
> Year (e.g 1995.123456). I have not been able to find a procedure allowing
> me to create 10 digit decimal number , without the number being rounded
> off to 8 digits.
> Does anyone know of a way to declare a variable to hold a 10 digit
> decimal number?

I think you are confusing internal machine precision with print formatting precision. For example, to print the double precision PI system variable:

```
IDL> print, !dpi
      3.1415927
IDL> print, !dpi, format='(e20.10)'
   3.1415926536e+00
```

The default print format only prints 8 digits, but you can change the print format to print more digits. On machines with IEEE arithmetic, 64 bit double precision stores about 15 digits of information. For a nice discussion of how floating point numbers are represented, see 'Section 4 - Floating-point numbers' at

http://metalab.unc.edu/pub/languages/fortran/unfp.html

Cheers,
Liam.

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