Subject: Re: Most significant digit and formatting floating point output
Posted by David Fanning on Tue, 07 Aug 2012 13:44:05 GMT
View Forum Message <> Reply to Message

Helder writes:

> well, I'm tangled up with something quite stupid, but I don't want to reinvent the wheel (for the 10th time today...).
> Here are two versions of the same question:
> 1) Short version: given a number such as 0.003456789 how do I get the most significant digit position? I need this number to produce formatted output that would convert the number to simply 0.003. In general I can figure this out with some IFs and stuff like that, but I'm hoping there is a more "elegant" way for this.
>
> 2) Long version: I'm analyzing some images and I get results with errors. These numbers are floating point and I would like to format the output so that it looks something like this: 'My results are (0.123 +/- 0.003) units' and the source data is:
> Result = 0.123456789
> Error = 0.003456789
> The point is that I need to find the first non-zero element in Error. Then I would use this number in the FORMAT parameter like this: MyFormat = '(f0'+STRTRIM(FirstNonZeroElement+2,2)+'.'+STRTRIM(FirstNonZ eroElement,2)+')'
> and use "MyFormat" as formatting for the string conversion of both.
> (in the above example FirstNonZeroElement should be 3 and MyFormat would be '(f05.3)'.

You might be interested in the Number_Formatter program
in the Coyote Library:

http://www.idlcoyote.com/programs/number_formatter.pro

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.idlcoyote.com/
Sepore ma de ni thui. ("Perhaps thou speakest truth.")