Subject: Re: Converting Doubles to Strings
Posted by biophys on Sun, 06 Nov 2005 01:01:53 GMT
View Forum Message <> Reply to Message

Hi, Craig

I tried your inputform_float and It seems that it won't do max
precision with '(d)',

IDL> print,inputform_float(-22.1234567890, '(d0)', /dconvert)
-22.123457D

IDL> print,inputform_float(-22.1234567890, '(d)', /dconvert)
-22.1234570D

Craig Markwardt wrote:

```
>  David, the "D" format (without zeroes) is probably what you want.  I
>  have a utility routine in INPUTFORM which converts a floating point
>  number to a string.  It tries both the G and E formats and takes the
>  shortest version that is still correct.  See below.
>
>  Craig
>
>  ;; Convert a floating style value to a string.  Note the conversion
>  ;; happens twice, once as a E and once as a G.  The shortest correct
>  ;; version of the two is used.
>  ;;  X - number to convert, scalar or array, float or double
>  ;;  FORMAT - optional format to use (set to '(E)' or '(D)' for max precision)
>  ;;  DCONVERT - set this if the output should be double precision
>  function inputform_float, x, format, dconvert=dcon
>    n = n_elements(x)
>    str = string(x(*), format=format)
>    sz = size(x) & tp = sz(sz(0)+1)
>
>    ;; Sorry, there appears to be no other way to make nice looking
>    ;; floating point numbers.
>    str1 = string(x(*), format='(G0)')
>    if tp EQ 4 then x1 = float(str1)
>    if tp EQ 5 then x1 = double(str1)
>    wh = where(x-x1 EQ 0, ct)
>    if ct GT 0 then str(wh) = str1(wh)
>    str1 = 0
>    str = strtrim(str,2)
>
>    p = strpos(str(0), 'E')  ;; Make sure at least one element is float-type
```

```
>    ;; Note, the space is needed in case the string is placed inside
>    ;; another expression down the line.
>    if p LT 0 then begin
>       if keyword_set(dcon) then str(0) = str(0) + 'D' $
>       else str(0) = str(0) + 'E'
>    endif
>    if keyword_set(dcon) then begin
>       ;; Convert from floating to double
>       p = strpos(str, 'E')
>       wh = where(p GE 0, ct)
>       for i = 0L, ct-1 do begin
>          str1 = str(wh(i))
>          strput, str1, 'D', p(wh(i))
>          str(wh(i)) = str1
>       endfor
>    endif
>    ;; Construct format like (N(A,:,","))
>    fmt = '('+strtrim(n,2)+'(A,:,","))'
>    return, string(str, format=fmt)
>  end
>
>
>
>  --
>   ------------------------------------------------------------ --------------
>  Craig B. Markwardt, Ph.D.      EMAIL: craigmnet@REMOVEcow.physics.wisc.edu
>  Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response
>   ------------------------------------------------------------ --------------
```