Subject: Re: STRMID question
Posted by btt on Tue, 21 Aug 2001 15:37:59 GMT
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Hi Paul,

I don't know diddle about how strings are handled except that switching between strings and bytes (where IDL really handles strings) is definitely an eye-glazer.

Check out the following; the number of columns of the output array is matched to the string element with the most number of characters, in your example the last element. So, to me, the question is, how come IDL doesn't put back these strings into a simpler vector when using the higher-order string processing commands (like strmid)?

Ben

```
IDL> s='_'+strtrim(10L^lindgen(10),2)+'.'
IDL> print, s
_1. _10. _100. _1000. _10000. _100000. _1000000. _10000000. _100000000. _1000000000.
IDL> print, byte(s)
  95  49  46   0   0   0   0   0   0   0   0   0
  95  49  48  46   0   0   0   0   0   0   0   0
  95  49  48  48  46   0   0   0   0   0   0   0
  95  49  48  48  48  46   0   0   0   0   0   0
  95  49  48  48  48  48  46   0   0   0   0   0
  95  49  48  48  48  48  48  46   0   0   0   0
  95  49  48  48  48  48  48  48  46   0   0   0
  95  49  48  48  48  48  48  48  48  46   0   0
  95  49  48  48  48  48  48  48  48  48  46   0
  95  49  48  48  48  48  48  48  48  48  48  46
IDL> help, s, byte(s)
S               STRING    = Array[10]
<Expression>    BYTE      = Array[12, 10]
IDL> for i = 0, 9 do help,s[i], byte(s[i])
<Expression>    STRING    = '_1.'
<Expression>    BYTE      = Array[3]
<Expression>    STRING    = '_10.'
<Expression>    BYTE      = Array[4]
<Expression>    STRING    = '_100.'
<Expression>    BYTE      = Array[5]
<Expression>    STRING    = '_1000.'
<Expression>    BYTE      = Array[6]
<Expression>    STRING    = '_10000.'
```

<Expression>   BYTE   = Array[7]
<Expression>   STRING   = '_100000.'
<Expression>   BYTE   = Array[8]
<Expression>   STRING   = '_1000000.'
<Expression>   BYTE   = Array[9]
<Expression>   STRING   = '_10000000.'
<Expression>   BYTE   = Array[10]
<Expression>   STRING   = '_100000000.'
<Expression>   BYTE   = Array[11]
<Expression>   STRING   = '_1000000000.'
<Expression>   BYTE   = Array[12]

Paul van Delst wrote:
>
> Hello,
>
> I have a "question" about the output of STRMID. Consider the following:
>
> Given an input string array:
>
> IDL> s='_'+strtrim(10L^lindgen(10),2)+'.'
> IDL> print, s
> _1. _10. _100. _1000. _10000. _100000. _1000000. _10000000. _100000000. _1000000000.
>
> I search for the "_" and "." characters (I do a reverse search as there may be other "_"
> or "." in the string before the last set):
>
> IDL> delim1 = STRPOS(s, '_', /REVERSE_SEARCH) + 1
> IDL> delim2 = STRPOS(s, '.', /REVERSE_SEARCH) - 1
>
> So now I want to extract out the substrings from the string array delimited by delim1 and
> delim2:
>
> IDL> help, STRMID(s, delim1, delim2-delim1+1)
> <Expression>   STRING   = Array[10, 10]
>
> How come I get a 2-D array output? I can sort of see how that _could_ happen since delim1
> and delim2 are both vectors so the output:
>
> IDL> print, STRMID(s, delim1, delim2-delim1+1)
> 1 1. 1. 1. 1. 1. 1. 1. 1. 1.
> 1 10 10. 10. 10. 10. 10. 10. 10. 10.
> 1 10 100 100. 100. 100. 100. 100. 100. 100.
> 1 10 100 1000 1000. 1000. 1000. 1000. 1000. 1000.
> 1 10 100 1000 10000 10000. 10000. 10000. 10000. 10000.

> 1 10 100 1000 10000 100000 100000. 100000. 100000. 100000.
> 1 10 100 1000 10000 100000 1000000 1000000. 1000000. 1000000.
> 1 10 100 1000 10000 100000 1000000 10000000 10000000. 10000000.
> 1 10 100 1000 10000 100000 1000000 10000000 100000000 100000000.
> 1 10 100 1000 10000 100000 1000000 10000000 100000000 1000000000
>
> sort of makes sense, but does it make sense to anyone that it _should_ happen?? It's not a
> big deal since I can do a
>
> IDL> si=STRMID(s, delim1, delim2-delim1+1)
> IDL> i=indgen(10)
> IDL> print, si[i,i]
> 1 10 100 1000 10000 100000 1000000 10000000 100000000 1000000000
>
> to extract the diagonal, but the original result sorta threw me and I haven't yet
> recovered <whimper>.
>
> paulv
>
> --
> Paul van Delst A little learning is a dangerous thing;
> CIMSS @ NOAA/NCEP Drink deep, or taste not the Pierian spring;
> Ph: (301)763-8000 x7274 There shallow draughts intoxicate the brain,
> Fax:(301)763-8545 And drinking largely sobers us again.
> Alexander Pope.

--
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