
Subject: Re: legend not working with symcat
Posted by [David Fanning](#) on Wed, 04 Nov 2009 09:41:33 GMT
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maurya writes:

```
> The routine 'legend' is not working with the function 'symcat' for
> the following test program.
>
> ;;;;;;;;;;=====
> pro legend_test
>
> set_plot,'win'
>
> window,0,xs=600,ys=500
>
> n=12
> xx=findgen(200)
> for i=0,n-1 do begin
>   ii=i+1
>   yy=sin(xx!*dtor*ii*0.2)
>   if (i eq 0) then plot,yy,yr=[0,1.1],psym=symcat(i),/yst $
>       else oplot,yy,psym=symcat(i),symsize=0.6,nsum=2
> endfor
>
> lines=indgen(n)
> item='p='+string(lines,format='(i2.2)')
> legend,item,psym=symcat(lines)
>
>
> stop
> end
> ;;;;;;;;;;=====
>
> Can anyone help.
```

Probably not. The problem is that SymCat is not "vectorized" in this way, and with good reason. Most of the symbols SymCat creates have to be built one-at-a-time with USERSYM. Then selected with the symbol index 8. So, if it was vectorized, you would certainly end up with a vector filled mostly with 8's.

```
IDL> symbols = IntArr(10)
IDL> FOR j=0,9 DO symbols[j] = SymCat(j + 10)
IDL> Print, symbols
 10  8  8  8  8  8  8  8  8  8
```

In other words, the symbol created by USERSYM is "ephemeral" and can only be used for a short time. Well, until the *next* symbol is defined.

The only way to fix this, as far as I can tell, would be to modify legend.pro to call SymCat whenever it creates a symbol.

On lines 425-427, in which PLOTS is being used to draw the symbol in the legend with PSYM, I changed "psym=psym[i]" to "psym=SymCat(psym[i]" and I changed your example program call from this:

```
legend, item, psym=SymCat(lines)
```

To this:

```
legend, item, psym=lines
```

And all works as you expect.

Wayne would have to confirm that this is the only place a change would have to be made. But I think he could add this to legend and gain access to 35 more symbols than he has now and not be worried by backward compatibility at all. ;-)

Cheers,

David

--

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Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Sepore ma de ni thui. ("Perhaps thou speakest truth.")
