Mark Hadfield wrote:
>
>   for each element foo add a single keyword,
> foo_properties, thus:
>
> pro my_visualisation $
>   , VIEW_PROPERTIES=view_properties $
>   , XAXIS_PROPERTIES=xaxis_properties $
>   , YAXIS_PROPERTIES=yaxis_properties $
>   , SURFACE_PROPERTIES=surface_properties $
>   , WINDOW_PROPERTIES=window_properties
>
>   theview = new_view(UNITS=2, DIMENSIONS=, _EXTRA=view_properties)
>   thexaxis = new_axis(DIRECTION=0, TICKFORMAT=...,
> _EXTRA=xaxis_properties)
>   theyaxis = new_axis(DIRECTION=1, TICKFORMAT=...,
> _EXTRA=yaxis_properties)
>   ; Add the axes to a model & add that to the view
>   ; Get data
>   thesurface = new_surface(STYLE=2, DATAX=..., _EXTRA=surface_properties)
>   ; add the surface to the model
>   new_window, GRAPHICS_TREE=theview, RETAIN=2, _EXTRA=window_properties
> end
>
> Now to control (say) the X axis the caller just sets xaxis_properties equal
> to a structure containing the appropriate keyword:value pairs, e.g.:
>
> my_visualisation, XAXIS_PROPERTIES={notext:1, minor:0}
>
> Now this approach obviously relies on the "_properties" structures
> overriding the defaults. When I first tried this I found that the
> xaxis_properties keyword was not working and that this was because I had
> happened to use inheritance by reference in new_axis. The rest (as they say)
> is history...

   If you follow this approach, you might almost as well pass the
structure explicitly instead of relying on the _extra passing
mechanism. Things like this prompted me a while ago to write my
little ChkStru routine, where you test (a) if the thing you test
is a structure, and (b) if it contains what you are looking for.
An example for setting axis properties could look like:
   IF ChkStru(xaxis_properties, 'DIRECTION') THEN
thexaxis->SetProperty, $
     direction=xaxis_properties.direction

IF ...

 But I realize, this may get a bit lengthy from time to time ;-)

Thanks for the thoughtful discussion,

Martin

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