
Subject: zoom at widgets

Posted by skymaxwell@gmail.com on Sat, 28 Nov 2015 13:43:03 GMT

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I have 2 draw widgets. The first - it's full image (draw_widget) and second zoom_widget.

For draw_widget i turn on button events and motion events

```
draw_widget=WIDGET_DRAW(draw_base,XSIZE=1440,YSIZE=720,/MOTION_EVENTS,$
  /BUTTON_EVENTS,X_SCROLL_SIZE=720,Y_SCROLL_SIZE=360,EVENT_PRO =
"doMove")
```

```
state={pImage:PTR_NEW(image),$      ;pointer to image
  langCat:oLangCat,$                ;langcat
  workDir:workDir,$                 ;dir for save
  localDir:local_dir,$              ;dir current
  draw:draw_widget,$                ;full image will be here
  imageLoaded:0,$                   ;is image loaded ?
  label:label_value,$               ;label
  zoom:zoom_draw,$                  ; zoom widget
...
}
```

I suggest need to do the following

1. get X,Y
2. get Window ID
3. use TVRD(my region)
4. CONGRID OR REBIN
5. get and set Window ID for zoom widget
6. use TVSCL to do output in zoom widget

here is fragment of code

```
PRO doMove,event
  WIDGET_CONTROL,event.top,GET_UVALUE=pState
  x=event.x
  y=event.y
...
;if mouse button was pressed
IF (event.press EQ 1) THEN BEGIN
  CATCH
  IF ((*pState).imageLoaded NE 0) THEN BEGIN
    data=(*pState).pImage ;get image
    WIDGET_CONTROL,(*pState).draw,GET_VALUE=id ;get ID
    WSET,id ;set ID
    zoom_data=TVRD(x-20,y-20,10,10) ; read current graphics
    zoom_data=CONGRID(zoom_data,360,360,/interp) ; what is better congrid or rebin ?
```

```
WIDGET_CONTROL,(*pstate).zoom,GET_VALUE=id ;get ID zoom
WSET,id ; set zoom current
TVSCL,zoom_data ;output
ENDIF
ENDIF
END
```

it's don't worked as well. it's don't showing zoom at all regions of full image
And zoom images not like original image

Thanks

Subject: Re: zoom at widgets
Posted by skymaxwell@gmail.com on Sat, 28 Nov 2015 18:29:57 GMT
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i did some changes. It's works

```
IF ((*pState).imageLoaded NE 0) THEN BEGIN
  data=(*pState).pImage
  zoom_data=data[x-4:x+4,y-4:y+4]
  help,zoom_data
  WIDGET_CONTROL,(*pState).draw,GET_VALUE=id
  WSET,id
  zoom_data=REBIN(zoom_data,360,360,/SAMPLE)
  WIDGET_CONTROL,(*pstate).zoom,GET_VALUE=id
  WSET,id
  TVSCL,zoom_data
ENDIF
ENDIF
```

but zoomed images still not like original. Zoomed image pixels are changing own intensivity. Why ?

Subject: Re: zoom at widgets
Posted by [Helder Marchetto](#) on Sat, 28 Nov 2015 23:37:39 GMT
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On Saturday, November 28, 2015 at 6:30:04 PM UTC, skymaxwell wrote:

```
> i did some changes. It's works
>
> IF ((*pState).imageLoaded NE 0) THEN BEGIN
>   data=(*pState).pImage
>   zoom_data=data[x-4:x+4,y-4:y+4]
>   help,zoom_data
```

```
> WIDGET_CONTROL,(*pState).draw,GET_VALUE=id
> WSET,id
> zoom_data=REBIN(zoom_data,360,360,/SAMPLE)
> WIDGET_CONTROL,(*pstate).zoom,GET_VALUE=id
> WSET,id
> TVSCL,zoom_data
> ENDIF
> ENDIF
>
> but zoomed images still not like original. Zoomed image pixels are changing own intensity.
Why ?
```

Hi,
the intensities you display are adapted (rescaled) between 0 and 255 using the tvscl command. In other words, what tvscl does is this:
tv, bytscl(zoom_data)

If you want the scaling to be the same in the two images, you have to find out what scaling you have in the first image and apply this to the zoomed image.
See <http://www.exelisvis.com/docs/BYTSCL.html> for more information.

If you don't use any scaling in the first image (that means you simply use tvscl), then you can substitute your tvscl command in the zoom data display with this:
mn=min(data, max=mx)
tv, bytscl(zoom_data, max=mx, min=mn)

I hope it helps.

Cheers,
Helder

Subject: Re: zoom at widgets
Posted by skymaxwell@gmail.com on Tue, 01 Dec 2015 09:26:03 GMT
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Thank you. I fixed it.

Now faced with another question -
How get geocoordinates from full image to zoom?

For zoom widget I have geocoordinates of center point only (latitude and longitude). How to use geocoordinates for central point to get geocoordinates for all zoomed region

Guess I need use CONVERT_COORDS function, but how to do it by correct way ?

If i did so, as shown below i've got coordinates [-180;-90] [180;90]

```
PRO doMoveZoom,event
  WIDGET_CONTROL,event.top,GET_UVALUE=pState
  x=event.x
  y=event.y
  print,"Coordinates in zoom widget =",x,y

  IF ((*pState).zoomLoaded NE 0) THEN BEGIN
    data=(*pState).pzoomImage
    ;geocoordinates central pixel
    zoom_coords=(*pState).zoom_coords
    value=data[x,y]
    print,"Coordinates in zoom widget=",x,y,value," Central geo_point=",zoom_coords
    ; How to use geocoordinates for central point
    ;to get geocoordinates for all zoomed region ?
    D = CONVERT_COORD(x,y,/DEVICE,/TO_DATA)
  ENDIF
...
```

Thanks

Subject: Re: zoom at widgets
Posted by skymaxwell@gmail.com on Wed, 02 Dec 2015 15:57:58 GMT
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I solved it
