
Subject: Re: display gray image with NaN
Posted by [jpleahy2](#) on Sat, 04 Mar 2017 10:00:33 GMT
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On Friday, March 3, 2017 at 1:55:26 PM UTC, dashtab...@gmail.com wrote:

> Hello everybody
>
> i have a gray scale image (one band with NaN value) and display it with image() and
widget_window().
> i want to show specific values (maybe gt 1000 pixels) over image with red color.
> like this. <http://pasteboard.co/EYXxQWAAW.jpg>
>
> Thank you for your help.
> Regards

1) If required, define a colour scale to map your raw data values to pixel values, e.g. for a
greyscale RGB should all be the same:

```
offset = MIN(raw_data)
scale = 255/(1000-offset)
data = BYTE(REBIN(scale*(raw_data - offset),N,M,3))
```

(doesn't have to be bytes with IMAGE(), but most display devices can only cope with 256 levels
per RGB so you might as well).

2) Choose a colour well away from the main colour map to represent NaNs and saturated pixels.

```
nan_colour = [0,0,1] ; blue NaN
sat_colour = [1,0,0] ; red for values > 1000
nanpix = WHERE(FINITE(raw_data))
```

3) Flatten array temporarily so the indexing from WHERE will work:

```
data = REFORM(data, N*M,3)
data[nanpix,*] = nan_colour
satpix = WHERE(raw_data GT 1000)
data[satpix,*] = sat_colour
data = REFORM(data,N,M,3)
```

4) Display, with options as required:

```
graphic = IMAGE(data)
```
