
Subject: Confused about image dimensions

Posted by [Helder Marchetto](#) on Mon, 01 Jun 2015 15:27:10 GMT

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Hi,
maybe I'm missing something very basic...
Suppose I make an image with these commands:
w = window(dimension=[600,600])
i = image(dist(600), margin=0, image_dimensions=[100,100], current=w)

The idea is that the image has 600x600 pixels, but the units are 100x100.
So each pixel (device units) has a size of 6.

If I now change the data:
i.setData, dist(300)

It turns out that the "image does not change" (in appearance) and not the 300 pixel correspond to 100 units. So that the pixel has a size of 3 units.

Can I redefine, after the setData, the image_dimensions?

I did notice that the "image_dimensions" keyword is under the "Keywords are applied only during the initial creation of the graphic." part of the help. Just looking for a way around this.

Thanks,
Helder

Subject: Re: Confused about image dimensions

Posted by [Helder Marchetto](#) on Mon, 01 Jun 2015 21:35:49 GMT

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On Monday, June 1, 2015 at 9:18:36 PM UTC+2, alx wrote:

> Le lundi 1 juin 2015 17:27:14 UTC+2, Helder a écrit :

>> Hi,
>> maybe I'm missing something very basic...
>> Suppose I make an image with these commands:
>> w = window(dimension=[600,600])
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>> It turns out that the "image does not change" (in appearance) and not the 300 pixel correspond to 100 units. So that the pixel has a size of 3 units.

```

>>
>> Can I redefine, after the setData, the image_dimensions?
>>
>> I did notice that the "image_dimensions" keyword is under the "Keywords are applied only
during the initial creation of the graphic." part of the help. Just looking for a way around this.
>>
>> Thanks,
>> Helder
>
> Keywords IMAGE_DIMENSIONS and IMAGE_LOCATION are meant for replacing X and Y
vectors in case of a regularly sampled image, independently on the number of pixels in the image.
> For example, given the array A[300,300],
> i = image(A, IMAGE_DIMENSIONS=[100,150], IMAGE_LOCATION=[20,30])
> means that the X-axis goes from 20 to 120 and Y-axis from 30 to 180.
>
> alx.

```

Thanks Alx.

Ok, so I think I got this. I need to use:
i.setData, dist(300), xVector, yVector

I tried this and the result puzzled me quite a bit.

Lets start from looking at what I get when I print the image object (in my case i) after creation:

```
IDL> i = image(dist(600), margin=0, image_dimensions=[100,100], current=w)
```

```
IDL> i
```

```

SCALE_CENTER      = 50.000000    50.000000
XRANGE            = 0.00000000    100.00000
YRANGE            = 0.00000000    100.00000

```

I only left the relevant results above.

If I use dist(300) I get exactly the same result.

If I then insert a image using two vectors x and y, here is what I get:

```
IDL> i.setData, dist(300), cgsscalevector(findgen(300),0,100, /double),
cgsscalevector(findgen(300),0,100, /double)
```

```

SCALE_CENTER      = 50.167224    50.167224
XRANGE            = 0.00000000    100.33445
YRANGE            = 0.00000000    100.33445

```

Why is xrange not ending at 100? I would expect that because

```
IDL> min(cgsscalevector(findgen(300),0,100, /double))
```

```
0.000000000000000000
```

```
IDL> max(cgsscalevector(findgen(300),0,100, /double))
```

```
100.0000000000000000
```

In order to get the original result, I need this:

```
IDL> i.setData, dist(300), cgsscalevector(findgen(300),0,99.0+2.0/3d, /double),
```

```
cgscalevector(findgen(300),0,99.0+2.0/3d, /double)
  SCALE_CENTER      = 50.000000    50.000000
  X RANGE           = 0.00000000    100.00000
  Y RANGE           = 0.00000000    100.00000
```

With:

```
IDL> min(cgscalevector(findgen(300),0,99.0+2.0/3d, /double))
  0.000000000000000000
IDL> max(cgscalevector(findgen(300),0,99.0+2.0/3d, /double))
  99.666666666666671
```

Where is this missing third coming from?

Thanks,
Helder

PS: pardon my being pedantic...
