Subject: Dilating at image boundaries
Posted by peter.albert@gmx.de on Thu, 03 Nov 2005 14:04:17 GMT
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Hi all,

I am trying to enlarge (satellite) pixels to be displayed using e.g. TV by using DILATE. My problem is that at the image boundaries DILATE seems to refuse to do its job :-)

I'll illustrate it with a simplified example.

Let's say I have a vector with elements either being zero or different from zero. Now I'd like to "draw a border" around each pixel different from zero. With DILATE, it looks like this:

```
IDL> v = [0,0,0,1,0,0,0]
IDL> s = replicate(1,3)
IDL> print, dilate(v, s, /gray, /constrained)
 0   0   1   1   1   0   0
```

Everything fine so far, the center pixel is no bordered by two more pixels with the same value.

Now, if I am going to the edge of the vector, it looks like this:

```
IDL> v = [0,1,0,0,0,0,0]
IDL> s = replicate(1,3)
IDL> print, dilate(v, s, /gray, /constrained)
 1  1  1  0   0   0   0
```

Still o.k., the structuring element s just extends to the first element of v.

But now, if s gets larger, it's again no problem in the center:

```
DL> v = [0,0,0,1,0,0,0]
IDL> s = replicate(1,5)
IDL> print, dilate(v, s, /gray, /constrained)
    0   1   1   1   1   1   0
```

But alas, at the image border things don't work any more:

```
IDL> v = [0,1,0,0,0,0,0]
IDL> s = replicate(1,5)
IDL> print, dilate(v, s, /gray, /constrained)
 0  0  0  0   0   0   0
```

So the problem seems to be the structuring element extending outside the vector. Is this a bug or a feature? I don't know.

Best regards,

Peter