Subject: Re: Erosion/Dilation Operators
Posted by Kirt Schaper on Wed, 19 Feb 1997 08:00:00 GMT

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David Fanning wrote:
>
> Hi,
>
> Does anyone have any practical experience using the erosion
> and dilation operators in IDL? I can't make much sense of the
> documentation. In particular, I can't figure out what a good
> structuring element would be.

The way I think about it is that the structuring element (SE) is
like a kernel for a convolution. it is centered over each pixel
in the input image, and if all non-zero pixels in the SE are also
non-zero in the input image, then the pixel in the output image is
set.

The most common SE's are square (or circular) masks 'centered'
in the middle, e.g. replicate(1,3,3) or:

```
se = bytarr(5,5)
for i=0,4 do &
  for j = 0,4 do &
    if (sqrt((i-2)^2 + (j-2)^2) le 2) then &
      se(i,j) = 1
```

Warning: non-symmetric and/or non-centered structuring elements
can lead to serious headaches.

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