Subject: Re: Erosion/Dilation Operators
Posted by Christian Soeller on Wed, 19 Feb 1997 08:00:00 GMT
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Achim Hein <hein@nv.et-inf.uni-siegen.de> writes:

> These functions are a very fast way to clean up data due to special
> expectation but think about the border of dilated/eroded areas - you
> shift the border of the eroded area and so you can lost information you
> are interested in.

Not necessarily true. You normally do an erosion (or several erosions) followed by the same number of dilations with the same structuring elements. That will remove small areas and smooth boundaries of remaining areas without shifting them too much.

Typical structuring elements for 2D images:

s = replicate(1,3,3)

or the cross

```
 +
+++
 +
```

(3x3 array with indicated elements equal to one). You should experiment a bit. Standard textbooks on image processing will have a section on morphological image processing.

An alternative approach to reject 'noise ice' which might be characterised by having a very small area is to delete all 'connected' areas that are smaller than a given threshold. See the example of the 'label_region' function on how to do something like that.

Christian