Subject: MORPH_XYZ and values keyword
Posted by btt on Tue, 24 Jun 2003 21:00:40 GMT
View Forum Message <> Reply to Message

Hello,

I completely mystified by the VALUES keyword to the MORPH_XYZ (like MORPH_TOPHAT) routines. I think I understand the meaning of VALUES for DILATE and ERODE-like routines - but I can't make sense of the MORPH_XYZ routines.

Here's the description of the so-called structuring element that these rotuine accept...it gives the shape and 'on-off'-ness of each pixel.

A one-, two-, or three-dimensional array to be used as the structuring element. The elements are interpreted as binary values ï¿½ either zero or nonzero. The structuring element must have the same number of dimensions as the Image argument.

Now here's the decription of the VALUES keyword...

An array of the same dimensions as the Structure argument providing the values of the structuring element. If the VALUES keyword is not present, all elements of the structuring element are 0.

What the heck does that mean?

I thought providing the VALUES was like
providing a weighting to the structuring element.

Here's an example using the MORPH_TOPHAT routine... if here's a structure with a narrow brim - any peaks detected that fit within the 1s is a keeper.

```
0 0 0 1 0 0 0
0 1 1 1 1 1 0
0 1 1 1 1 1 0
1 1 1 1 1 1 1
0 1 1 1 1 1 0
0 1 1 1 1 1 0
0 0 0 1 0 0 0
```

Now if I am working with a grayscale image... I want to make sure the peak is tall (bright) enough so, I weight the structuring element with

some kind of a height - like I want the peak to be at least 5 whatevers above the brim values. So I set VALUES equal to...

```
0 0 0 5 0 0 0
0 5 5 5 5 5 0
0 5 5 5 5 5 0
5 5 5 5 5 5 5
0 5 5 5 5 5 0
0 5 5 5 5 5 0
0 0 0 5 0 0 0
```

I can't see any difference between the results when I do and do not provide the VALUES. Which, of course, means I don't understand it at all.

Stumped and grateful for any help,

Ben
