
Subject: Hough transform help

Posted by [mperrin+news](#) on Sat, 17 Aug 2002 04:18:02 GMT

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I'm attempting to use the new HOUGH function in IDL 5.5 to detect linear features in an image. However, I don't understand the scaling it applies to its results.

I have a 256x256 floating-point image. I am doing this:

```
edge_enh = sobel(image)
h = hough(edge_enh,/gray,rho=rho,theta=theta)
```

and it very nicely detects the lines in the image as bright points in the Hough transform. However, I want to extract the slopes and intercepts of those lines (in standard $y=mx+b$ format). Well, that should be easy given rho and theta for each line - except that the rho which is being returned ranges from -181 to 181.

Negative values don't make any sense to me, particularly given that my image looks something like

```
+-----+
| \  | |
| \  | |
| \  | |
| \  | |
+-----+
```

..all of which are clearly to the right of the origin and thus should have positive rho. It's getting the thetas perfectly correct as far as I can tell.

Does anyone have any better explanation of the way that Hough calculates the rho values? I can provide more details if it's useful, but as I've never used Hough transforms before I assume there's just something I'm misinterpreting.

- Marshall
