## Subject: find the maximum diameter of an object in an image
Posted by Jeff N. on Mon, 10 Oct 2005 17:40:46 GMT

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Hi folks,

I have some CT data (of meteorites, not people) that I'm extracting
slices of.  The actual images I'm taking slices of are images where
grains in the image have been set to 1, and everything else set to
0....so these are binary images.  What I want to do is take a slice out
of the CT volume, find the grains in the slice (which I'm doing with
David Fanning's FIND_BOUNDARY() function), and then find the longest
straight line that you can draw through the object (that goes from one
boundary, through the center point, and then to the opposite boundary),
which is its maximum diameter.  FIND_BOUNDARY() gives me both the
outline of the object and the center point, so I have that to work
with.  It also gives me perimeter and area, so I'm wondering if there
isn't some kind of geometry trick that I haven't thought of that will
get me what I need.  If I do a principal components analysis on the
boundary coordinates, wouldn't that be the maximum diameter?

If anyone can point me in the right direction, or has some code they'd
like to share, I'll be very grateful.

Thanks,
Jeff