Subject: Re: Repost of Vertex question...
Posted by Struan Gray on Fri, 29 Jun 2001 14:01:54 GMT
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Craig Markwardt, craigmnet@cow.physics.wisc.edu writes:
> Brian Koss <bakoss@rainbow.uchicago.edu> writes:
>>
>> I have images of polygons connected edge to edge in a
>> quasiperiodic array, like the one I have attached to this
>> message... The images are black and white and the edges of
>> the polygons are distinguisable because they are straight
>> lines. I would love to be able to use IDL to find the
>> vertices in this image.
>
> Cute. Somehow I don't think this is a program that
> someone on the newsgroup can knock out in ten minutes.

Oh. I don't know.

A quasicrystal will have a limited number of vertex orientations, which you can pick out by hand. Simply cut out one of each type of vertex into it's own sub-image, do a cross correlation between that and the whole image to find where that type of vertex occurs, and add up the resulting lists for each vertex type.

Alternately, if you know something about the scale invariance of the quasicrystal, find the postions of the edges or centres of the polygons in the same way, and then use the quasicrystal's scaling properties to find the vertices.

Struan