Subject: Re: A distracting puzzle
Posted by John-David T. Smith on Wed, 19 Sep 2001 13:28:13 GMT
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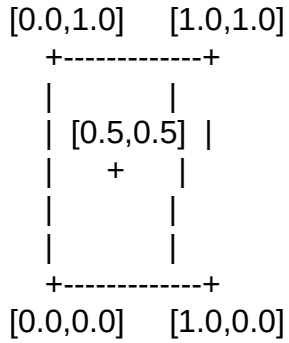
Martin Downing wrote:
>
> Hi JD,
>
> Since you are interested in high resolution, the relationship between pixels
> and points is of interest.
> I.e.: where in pixel (i,j) is point P(x=i, y=j)? Do you consider the pixel
> to be centered on the point P(i,j) or P(i+0.5,j+0.5)?
>
> Martin

This choice is somewhat arbitrary, but my convention has always been the latter: pixels centered at the 1/2 pixel. E.g. pixel [0,0] has center [0.5,0.5], and its lower left edge corresponds to [0.0,0.0]:



In case anyone is actually trying this for real, the correct answers for the 10x10 array and the default polygon given are (using my horribly slow algorithm):

Pix	Frac
11	0.3295
12	0.1284
21	0.3765
22	0.9866
23	0.4890
31	0.0567
32	0.9669
33	1.0000
34	0.5000
42	0.6706
43	1.0000

| 44 0.9006 |
| 45 0.0861 |
| 52 0.3176 |
| 53 0.8559 |
| 54 0.1299 |
| 62 0.0282 |
| 63 0.0876 |
+============+

JD