Subject: Re: IDLy approach to splatting points on a grid?
Posted by Jonathan Dursi on Fri, 24 Nov 2006 22:02:02 GMT
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Hi, Ed:

Thanks for the reply...

Your assumptions were:

> 1) your problem actually is 2-D, and
> 2) you really want square windows (not radii? really?), and
> 3) each particle has BOTH a radius of influence AND a value it contributes.

#3 is completely right, your hunch in #2 that I really want round windows is correct (but I'm willing to do the function evaluation and get zero in the corners to simplify things), and for #1, it will often be the case that this will be a 2d thing, but the ability to also handle 3d would certainly be a big benefit.

I like your brainstorming approach; I hadn't `gone there' with the 3 indexed arrays because it's not feasible (in general there's on order a million or so particles) but I think that's a good start; in particular, I think that in that approach likely likes the nucleus of how to do this in with sparse matricies.

It's straightforward to find out within which cell each particle lives, so that instead of examining the whole grid, one could only consider the window directly... but since some particles will have huge windows, and most very small ones, I'm not sure that helps... Still, the answer's in there somewhere, the hour is just too late for me to come up with it. I'll play with this some more tomorrow.

Jonathan

--
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