Subject: Re: Best way to generate arrays of coordinates for hypersurface calculations?
Posted by Jeremy Bailin on Thu, 08 Apr 2010 11:01:39 GMT
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> I'd like to add a few more features: mainly, the ability to make
> floating point arrays with a range that is smaller than the number of
> elements, like a 100x100x100 unit cube for instance. I think this
> would make the function quite a bit more complicated, but also a lot
> more complete. I'm also still uneasy about calculating functions this
> way. It seems like a huge waste of memory, but I can't think of any
> other way to do it without using many loops!
>
> James Preiss

In these cases, on occasion the loops win out. In particular, if the volume is smaller along one dimension, it might pay to loop over that dimension (and vectorize the other dimensions as you're doing). Depends how much memory is actually required - as long as you're within the physical memory of the machine, the vectorized approach will win out, but once you get beyond that it may be worth adding a loop. If you wanted to be clever, you could have your function evaluation code check to see how much memory would be required to create the index array and decide what method to use based on that - but I'd run some timing tests first to make sure that you know where the crossover is.

-Jeremy.