Subject: Re: Accurate/fast interpolation
Posted by mattf on Tue, 04 Sep 2007 14:47:36 GMT
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On Sep 4, 7:32 am, Steve <f...@k.e> wrote:
> Does anybody have a suggestion of speedups that might help in the
> following scenario...
>
> In a series of images there is a very small shift between succesive
> frames due to orbital dynamics on a spacecraft.
>
> For each image I can translate all the pixel locations to and from a
> common reference frame. The shift beween adjacent frames is sub pixel
> [typical value about 0.2].
>
> What I am trying at the moment is to set one image as a common
> reference, covert all the others to sub pixel positions on that
> reference frame and then use triangulate and trigrid to interpolate
> image values onto this common reference frame. This seems to work but
> is painfully slow [trigrid is fine triangulate takes many seconds].
>
> I just wondered since my data is nearly on the right grid to start with
> if there were a quicker way to do this?
>
> Any help gratefully appreciated
>
> S.R.Crothers [at] rl.ac.uk

Maybe a brute-force approach-- 'up-sample' your data so that the
displacements are full pixels rather than part-pixels. This leaves you
with a quantization error, but you've already got a larger
quantization error in the original image, no?