Subject: Re: Alternatives to griddata()
Posted by Andrew[3] on Fri, 25 May 2007 18:26:42 GMT
View Forum Message <> Reply to Message

On May 24, 5:25 pm, Andrew <Andrew.B.La...@gmail.com> wrote:
> Hi everyone,
>
> I'm currently using IDL to process remote sensing data of arctic sea
> ice. Recently, I've been modifying an existing set of IDL programs to
> handle some new high-resolution data. The main program does work with
> the new data set, but it runs much more slowly. i.e. from under one
> minute to about 4 minutes per image. (the images have gone from
> 400x340 to 1000x850)
>
> I've gone through that program eliminating for loops wherever
> possible, but it's still quite slow. Yesterday, I got the bright idea
> to use the systime() function and figure out which part of the program
> is taking so long. It turns out that the griddata() function is the
> culprit. For one image, that one function takes up 80-90% of the total
> program run time! (According to the time outputs anyway.)
>
> I am wondering if there is an alternative method to take irregularly
> spaced data stored as 3 vectors (xindex, yindex, and data), plot it on
> a 2D grid and interpolate it that is a bit faster. I'd like to keep
> using the inverse distance method of interpolation or something with
> similar behaviour to compare the high-res and low-res data. I've tried
> some IDL programming of my own, but nothing that I come up with is as
> fast as griddata.
>
> Any ideas?
>
> Andrew

Ok, turns out I answered my own question. I just have to make use of
the SEARCH_ELLIPSE keyword, and it gives me the result I'm looking
for. The images are virtually identical and produced in less than a
quarter of the time. Leave it to IDL to provide some extremely handy
non-intuitive functionality :)